Busy Beavers

Adventures with numbers

Grade 1 Arithmetic Book
(Pages 151 to 304)

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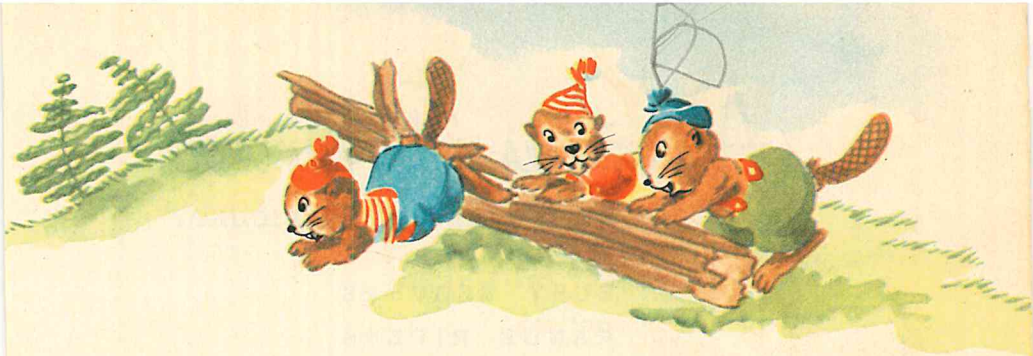
Busy



Beavers

Adventures with numbers

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★ ★ ★

Webster Publishing Company

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Adventures with numbers

IN ORDER OF INCREASING DIFFICULTY

BUSY BEAVERS
RANGE RIDERS
STRAIGHT SHOOTERS
AIRPLANE ACES
HOME RUN HITTERS
CAGE CHAMPIONS

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This book continues from Part 1 (suddenly split into two books; Part 1 has Pages 1 to 150; Part 2 has Pages 151 to 304 but does not include index which would have followed).

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Unit VII. Pages 151–176

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Unit VIII. Pages 177–206

Multiplying with 2's with carrying. Even and uneven division with 2's. Finding ½ of a number. Multiplying and dividing dollars and cents by 2.

Unit IX. Pages 207–232

Multiplying and dividing by 3. Finding ⅓ of a number. Multiplying with 0. Using length and liquid measure.

Unit X. Pages 233–256

Multiplying and dividing by 4. Finding ¼ of a number. Multiplying and dividing dollars and cents by 2, 3, and 4. Using liquid, dry, and weight measure.

Unit XI. Pages 257–280

Multiplying and dividing by 5. Finding ⅕ of a number. Telling time correct to 5 minutes.

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Practice and problems that review the year's work.

★ Preface

Plan of Series. Adventures with Numbers is unique in organization. Each book has a motif taken from the pupils' world and captivating to the pupil. The motif furnishes the book's title. Young learners assume the role of Busy Beavers or Range Riders as they experience adventures with numbers. The boy or girl who is a little older plays that he is on the rifle range or piloting a plane as he gains further skill and understanding. The upper grade pupil takes part in a make-believe ball game, the rules and the scores of which provide motivation and sliding measures of achievement. Emphasis is placed on crediting the pupil with what he does correctly, without undermining his confidence when he fails to make a perfect total score, or the hypothetical 100%.

Unit Organization. Each book is divided into twelve units, each unit a little book in itself, with presentation of new material, practice in computation, and helps in problem solving. Pages of races, drills, and problems, with like captions and illustrations, occur in each unit of a book. The four closing pages of a unit are:

a. Test on material of unit, with a goal.

b. Helps for those who failed to reach goal a.

c. Challenges for those who did reach goal a.

d. Final unit test, geared to average pupil.

The first and seventh units of each book are given largely to reviewing and reteaching. Thus, twice a year, there are systematic campaigns to strengthen foundations so that the pupil can go into new work with new confidence, even though there have been gaps in his earlier work.

Non-Discriminating Differentials. Careful provisions are made for pupils with different learning rates. This is done in such a way as not to foster a superior attitude on the part of the fast learner nor to embarrass the one who learns slowly. Among the beavers, one who mends the wall can take as much pride in his work as the one who builds it higher. In basketball, one who recovers the ball is as valuable to the team as one who passes the ball. There is no higher nor lower with the pupil who does his best with the work that is appropriate for him. In Adventures with Numbers, there is differentiation without discrimination.

Individualized Program. Directions are addressed to pupils. Pupils are asked to choose partners, or to divide into groups or teams to do specific tasks.

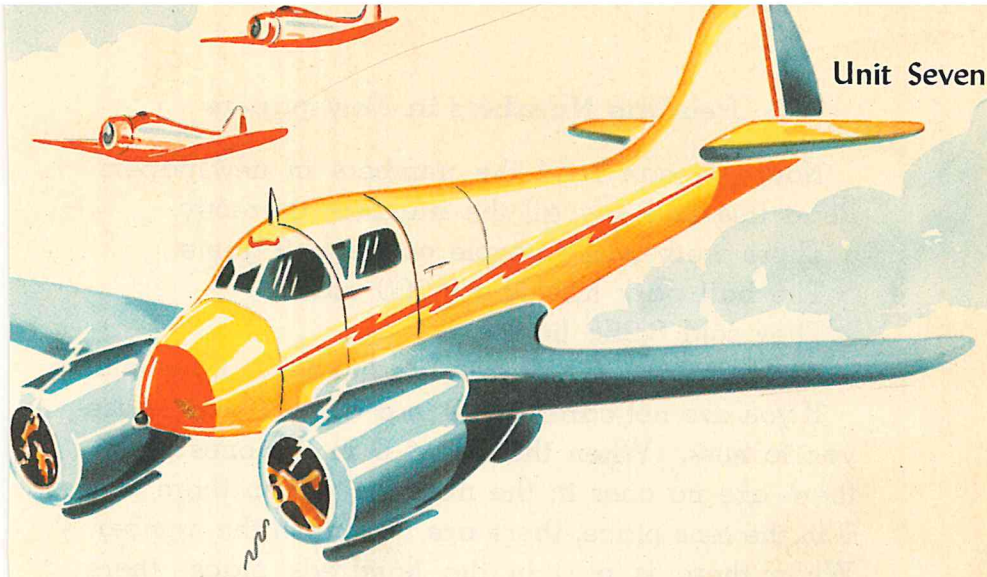
They mark each other's papers and go on to the next task. This builds up a feeling of responsibility on the part of the pupil, and helps to release the teacher from constant direction of the class so that she can give help where it is most needed. The range between the slow learner and the fast learner in the average class is great. This series provides material and a plan so that the teacher can guide each pupil along at his own rate, rather than merely "covering" the material judged appropriate for the average pupil.

Readiness. Experience and experiments show that pupils do not become ready of themselves. We also know that teaching is wasted when the pupil is not ready. A program of preparing the pupil for each next step is skillfully woven into Adventures with Numbers. The «times-and» facts precede carrying in multiplication; station numbers precede uneven division. A boy's bicycle repair shop grows into a partnership and into a small corporation before stocks and bonds are presented. No process or idea is introduced until the pupil has been conditioned for it.

Presentation of New Concepts. Meanings, skills, and processes that are most difficult for the child to grasp are usually the ones that are most difficult to present clearly in a text. An author is tempted to be satisfied with something that he knows is inadequate, and to hope that teacher and pupil can fill in what is lacking. In Adventures with Numbers, no effort has been spared to present each new idea clearly and adequately. A pupil is not stopped today by the height of the ultimate goal in arithmetic, but by some little point in today's lesson that is not clear to him. Our presentations make the steps short and leave no gaps.

Using Arithmetic. A pupil may excel in book computation or book problems, and fail to see that the purpose of what he learns in school is to help him outside of school. He fails to carry what he learns in the little world within the school to the big world on the outside. Adventures with Numbers guides the pupil to the use of arithmetic in his everyday affairs, and helps him see arithmetic as a part of his whole self and not just a part of his school self.

Importance of Arithmetic. Quantitative thinking plays a more decisive role in our age than ever before. This is an age of number, measurement, science, and technology. The pupil who leaves school deficient in arithmetic is blocked from entering many fields. He will be handicapped in his efforts to earn a good living, or to buy most with what he does earn. For the individual who will carry his load and for the nation, arithmetic is truly an important part of the education for survival.



An Airplane Flies Fast and Far

One airplane flew 469 miles in an hour.

469 means
400 → 4 hundreds
60 → 6 tens
9 → 9 ones
or 469 (hundreds, tens, ones)

You read 469 as four hundred sixty-nine.

Another airplane flew 3,917 miles.

3,917 means
3,000 → 3 thousands
900 → 9 hundreds
10 → 1 ten
7 → 7 ones
or 3,917 (thousands, hundreds, ten, ones)

You read 3,917 as three thousand nine hundred seventeen. Read the numbers below.

2,000	5,000	4,000	7,000	9,000	1,000
5,892	7,489	1,547	8,133	3,924	5,234

Reading Numbers in Newspapers

Now you can read the numbers in newspapers. Read this and say all the numbers correctly.

There were 9,325 people at the ball game.

The ball park has only 9,000 seats.

They sold 8,958 tickets.

Yesterday only 5,892 people came to see the game.

If you are not careful, a 0 in a number may cause you to miss. When there is a 0 in the ones place, there are no ones in the number. When there is a 0 in the tens place, there are no tens in the number. When there is a 0 in the hundreds place, there are no hundreds in the number.

Tell how many hundreds, how many tens, and how many ones in each of these numbers:

4,830 4,803 4,083 4,800 4,080 4,003

You read 4,830 as four thousand eight hundred thirty.

You read 4,803 as four thousand eight hundred three.

You read 4,083 as four thousand eighty-three.

You read 4,800 as four thousand eight hundred.

You read 4,080 as four thousand eighty.

You read 4,003 as four thousand three.

Read these numbers:

1.	6,470	6,407	6,047	6,400	6,040	6,007
2.	9,260	9,206	9,026	9,200	9,020	9,006
3.	1,467	4,254	7,937	2,168	5,537	6,214
4.	469	2,162	3,043	988	2,133	4,070

Reading and Writing Big Numbers

The 4 in 4,693 tells how many thousands there are in 4,693. Tell how many thousands in each of these numbers:

3,146 2,378 9,547 7,528 4,622 5,100

In writing big numbers, put a comma after the figure that tells how many thousands.

Write these numbers in figures:

1. Seven thousand eight hundred sixty-seven.
2. Nine thousand two hundred eighteen.
3. Six thousand twenty-nine.
4. One thousand seventy.
5. Two thousand three hundred thirty-one.
6. Three thousand two hundred eleven.
7. Write a 4-figure number with 0 in ones place. Read this number.
8. Write a 4-figure number with 0 in tens place. Read this number.
9. Write a 4-figure number with 0 in hundreds place. Read this number.
10. Write ten 4-figure numbers on the blackboard. Ask some child in your class to read them.
11. Read each of the numbers at the right.

8
20
316
5,947

12. Which figures are in ones place? In tens place? In hundreds place? In thousands place?

Number Riddles

You may read the easy addition facts from this table. All the facts in a column have the same sum. The sum is written in a circle at the bottom of the column. Say all the facts in this table quickly.

									0 9
								0 8	1 8
							0 7	1 7	2 7
						0 6	1 6	2 6	3 6
					0 5	1 5	2 5	3 5	4 5
				0 4	1 4	2 4	3 4	4 4	5 4
			0 3	1 3	2 3	3 3	4 3	5 3	6 3
		0 2	1 2	2 2	3 2	4 2	5 2	6 2	7 2
	0 1	1 1	2 1	3 1	4 1	5 1	6 1	7 1	8 1
0 0	1 0	2 0	3 0	4 0	5 0	6 0	7 0	8 0	9 0
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)

To play Number Riddles, say, "I am thinking of an addition fact whose sum is 9. One of the numbers is 6. What is the other number?"

Above (9), you may find $\begin{matrix}6\\3\end{matrix}$ and $\begin{matrix}3.\\6\end{matrix}$ Either of these gives the answer to the riddle. The number asked for is 3.

Harder Number Riddles

The addition facts in this table are harder than those on page 154. You will have to study them carefully. You play the number riddles exactly as you did on page 154. Practice until you can say the answer to each riddle.

								9
								1
							9	8
							2	2
						9	8	7
						3	3	3
					9	8	7	6
					4	4	4	4
				9	8	7	6	5
				5	5	5	5	5
			9	8	7	6	5	4
			6	6	6	6	6	6
		9	8	7	6	5	4	3
		7	7	7	7	7	7	7
	9	8	7	6	5	4	3	2
	8	8	8	8	8	8	8	8
9	8	7	6	5	4	3	2	1
9	9	9	9	9	9	9	9	9
(18)	(17)	(16)	(15)	(14)	(13)	(12)	(11)	(10)

In some of the addition facts below, the sum is missing, and in others one of the other numbers is missing. Say each missing number.

1.	5	9	*	6	8	*	9	6	*
	4	*	5	7	*	8	6	*	9
	*	13	12	*	17	15	*	15	16

To Help You Add Quickly and Well

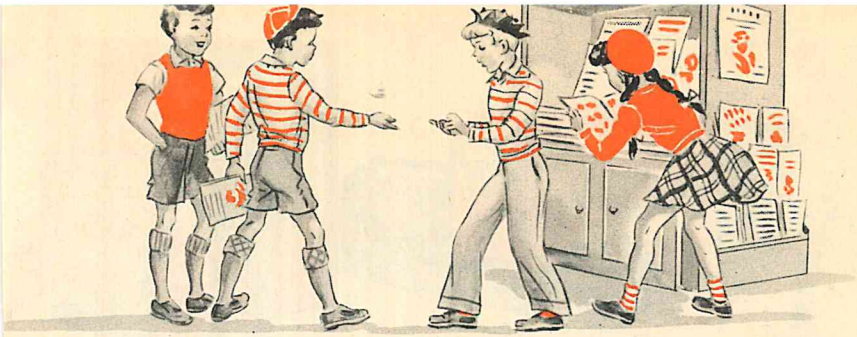
Practice these "adding by endings" until you can get each answer quickly. If you have trouble, study pages 102–105.

Set 1. Say or write the sums.

	a	b	c	d	e
1.	28+7	19+9	19+4	17+9	29+5
2.	23+8	17+7	13+8	28+2	27+3
3.	16+9	14+6	17+4	29+1	29+6
4.	29+7	19+2	27+8	13+9	16+5
5.	17+3	27+5	18+3	18+6	19+1
6.	25+8	16+7	19+8	26+6	25+9
7.	15+7	18+8	17+6	18+5	24+7
8.	17+5	22+8	16+8	21+9	25+5
9.	29+9	26+7	29+4	23+9	16+6
10.	22+9	25+7	19+7	26+8	27+9

Set 2. Say or write the sums.

11.	15+6	14+9	18+9	29+2	28+6
12.	17+8	24+8	12+8	24+6	12+9
13.	27+6	18+4	28+8	26+9	28+3
14.	25+6	28+9	27+4	18+2	13+7
15.	15+8	18+7	28+4	23+7	15+9
16.	28+5	27+9	29+3	23+9	29+8
17.	24+7	15+5	19+6	11+9	14+7
18.	19+5	14+8	26+5	19+3	16+4
19.	37+7	39+2	32+8	35+9	39+6
20.	46+8	42+9	48+5	44+8	47+6



Helping a Young Business Man

Jerry has sold 4 comics, 5 *Boys' Adventures,* 2 *Weekly News,* and 8 *Modern Stories.* He says he has sold 19 magazines in all. Check his adding.

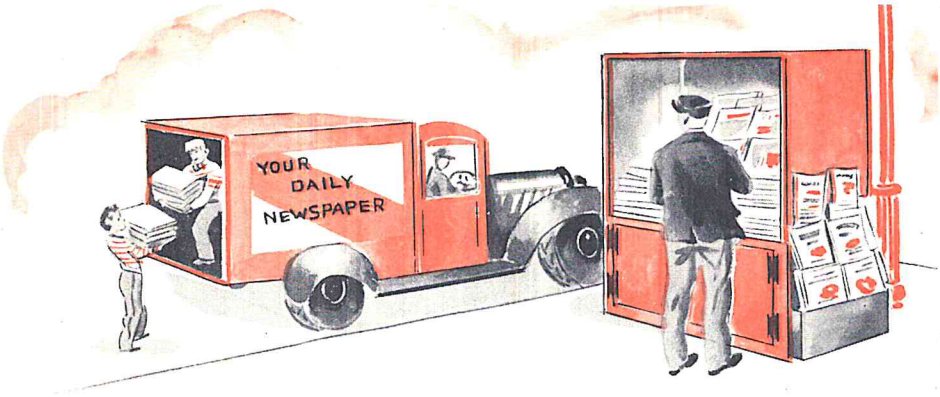
Add		Check	
4	Think	4	19
5	9	5	15
2	11	2	10
8	19	8	Think
19			

If you have trouble, study pages 103 and 107.

Every day Jerry writes down the number of each kind of magazine that he sells. He adds the numbers to find how many he sold in all that day.

Help Jerry by adding and checking.

	a	b	c	d	e	f	g	h	i	j
1.	5	6	4	9	4	3	4	7	9	8
	3	3	6	4	2	6	1	2	3	1
	9	5	3	3	3	4	8	8	4	8
	6	6	2	5	6	5	7	4	7	3
2.	8	6	8	4	5	4	7	8	6	8
	4	1	9	8	6	8	1	2	4	7
	6	9	7	7	8	7	9	5	6	2
	2	4	6	1	3	1	5	3	7	5



John Helps the Man at the News Stand

When the delivery trucks bring bundles of papers, John counts the number in each bundle. Then he finds how many papers there are in all.

Today there were 76 papers in one bundle, 89 in another bundle, and 78 in another bundle. How many papers were there in the three bundles?

Add ones column. Think 15, 23. Write **3** under 8 and carry 2.

Add tens column. Think 9, 17, 24. Write **24** as shown.

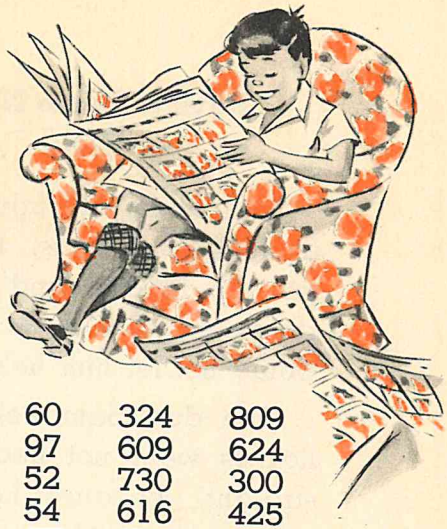
$$\begin{array}{r} 76 \\ 89 \\ 78 \\ \hline 243 \end{array}$$

The answer is **243**. To check, add ones column and then add tens column up. If you have trouble, study pages 108, 109, 111, and 113 again.

Add and check these bundles.

a	b	c	d	e	f	g	h
31	96	65	29	38	24	12	32
35	64	57	71	82	63	36	47
36	92	78	86	63	96	47	37
93	84	15	26	82	47	67	23

With the Sunday Papers



John knew that a 0 in a column to be added made the adding easier. He could skip over the 0.

1. Add these columns.

6	0	4	8	73	60	324	809
0	8	7	5	24	97	609	624
4	9	0	6	30	52	730	300
3	6	8	0	45	54	616	425

John knew, too, that a blank space in a column to be added made the adding easier. He could skip over the blank space.

2. Add these columns.

58	9	62	73	4	91	85	16
13	43	8	71	69	8	12	23
9	22	5	7	3	24	6	9
24	7	16	21	5	3	39	38

3. John counted Sunday papers. Here is what he wrote down. How many papers were there in all?

463 Posts
27 Heralds
132 Suns
359 Stars

4. Find how many Sunday papers in each of the following:

423	634	72	456	89	760
92	305	278	56	432	89
106	98	9	340	600	201
27	440	165	39	6	36

It Pays to Write Numbers Right

John	Sam
34	34
23	23
45	45
51	51
153	

John wrote his figures neatly in straight columns. It was easy for him to add and to get the right sum. The news stand man would not let him help unless he did good work.

One day Sam helped at the news stand. His figures were not neat, and his columns were not straight. Because he was not careful, the sums were wrong. Can you guess why the news stand man did not want Sam to help another day?

Write neatly in straight columns and add.

	a	b	c
1.	14, 32, 40	26, 33, 42, 15	310, 435, 240
2.	39, 17, 24	36, 40, 53, 67	281, 119, 426

Right	Wrong
23	23
8	8
486	486
18	18
535	

Danger! Be extra careful in copying numbers that do not have the same number of figures in them. Keep the right-hand edge straight. There are no empty spaces in ones column.

Write neatly in straight columns and add.

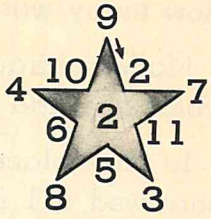
3.	7, 24, 32	9, 16, 33, 4	18, 231, 47, 219
4.	28, 6, 4	21, 6, 35, 2	121, 5, 247, 18
5.	35, 8, 43	30, 9, 3, 25	435, 22, 9, 117
6.	8, 16, 24	63, 5, 19, 48	340, 207, 61, 45

The 100 Subtraction Facts Told by the Stars

Subtract the number inside a star from each number on the outside. Begin at the arrow and go in the direction it points. Say only the remainders.

It is fun to have these stars copied on the blackboard and to give the answers quickly as someone points.

1.



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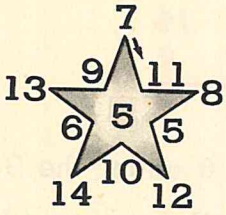

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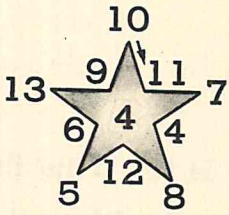

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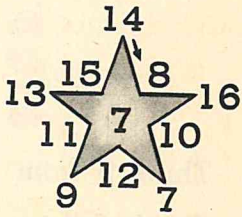
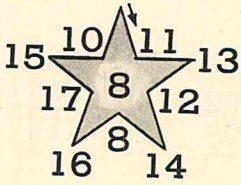


5. 12

6. 9



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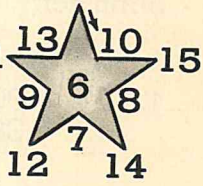

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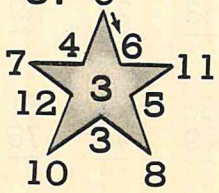
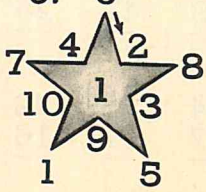


9. 6



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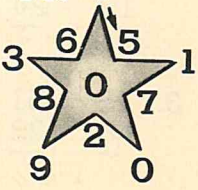


Subtraction with Borrowing

The teacher gave Mary 85 spelling words to learn. Mary has already learned 39 of them. How many words has she left to learn?

Mary subtracted 39 from 85 to find how many words she had left. This is how she did it.

In ones place, she could not take 9 from 5. She borrowed a 1 from the 8 in tens place to make the 5 a 15. This made the 8 a 7.

The Subtraction	The Thinking
85	7 15
39	3 9
46	4 6

Think 9 from 15 is 6. Write the **6** under the 9.

Think 3 from 7 is 4. Write the **4** under the 3.

Subtract:

	a	b	c	d	e	f	g	h
1.	71	90	62	45	53	42	54	97
	43	38	25	26	18	27	36	48
2.	58	62	71	95	53	70	74	96
	19	24	38	47	26	53	27	69
3.	75	51	64	33	42	86	73	91
	48	23	37	17	16	29	45	75

Borrowing When Subtracting Longer Numbers

Mr. West has gone 127 miles of a 980-mile trip. How many more miles does he have to go?

Since you cannot take 7 from 0, you borrow 1 from the 8 in tens place to make the 0 a 10. This makes the 8 a 7.

The Subtraction	The Thinking
980 or 980 127 or 127 853 or 853	9 7 10 1 2 7 8 5 3

Subtract:

	a	b	c	d	e	f	g
1.	673 249	784 255	635 218	871 516	585 327	783 429	852 346
2.	495 356	531 128	685 349	592 247	875 329	547 418	233 115
3.	781 437	946 529	645 328	594 246	553 125	892 447	947 318
4.	384 137	692 248	782 454	847 539	540 224	657 309	736 218
5.	345 326	243 209	760 751	133 128	540 533	744 715	887 878

Borrowing in Tens Place

Mr. Smith has gone 248 miles of a 629-mile trip. How many more miles does he need to go?

In tens place, you cannot take 4 from 2. You borrow 1 from the 6 in hundreds place to make the 2 a 12. This makes the 6 a 5.

The Subtraction	The Thinking
629 or 629 248 or 248 381 381	5 12 9 2 4 8 3 8 1

Subtract:

	a	b	c	d	e	f	g
1.	739 255	647 192	516 321	752 561	537 246	650 270	758 184
2.	648 256	739 143	517 325	406 212	717 164	668 375	462 281
3.	857 383	658 374	439 256	538 382	743 251	586 191	385 192
4.	726 82	354 70	958 85	617 42	433 341	729 684	535 440
5.	767 192	626 544	576 95	836 751	584 90	635 574	429 359

Sometimes We Have to Borrow Twice

Mr. Brown has gone 489 miles of a 736-mile trip. How many more miles does he need to go?

The Thinking in Two Steps

736	7 2 16	6 12 16
489	4 8 9	4 8 9
		2 4 7

In ones place, you cannot take 9 from 6. You borrow 1 from the 3 in tens place to make the 6 a 16. This makes the 3 in tens place a 2.

In tens place, you cannot take 8 from 2. You borrow 1 from the 7 in hundreds place to make the 2 a 12. This makes the 7 a 6.

Subtract:

	a	b	c	d	e	f	g
1.	534	947	623	472	722	854	291
	265	489	146	293	347	478	138
2.	528	369	446	735	364	543	621
	343	154	129	482	123	167	335
3.	634	713	637	364	274	546	752
	479	236	448	175	238	462	687
4.	463	333	856	817	593	331	925
	37	92	87	745	67	74	827

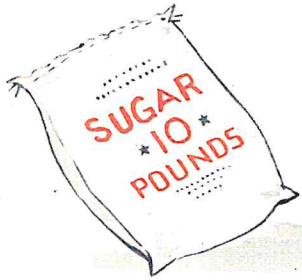
Using Pounds to Find Weights

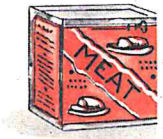
Do you know how much you weigh? If you do not know, perhaps you have scales in your school on which you can weigh yourself.

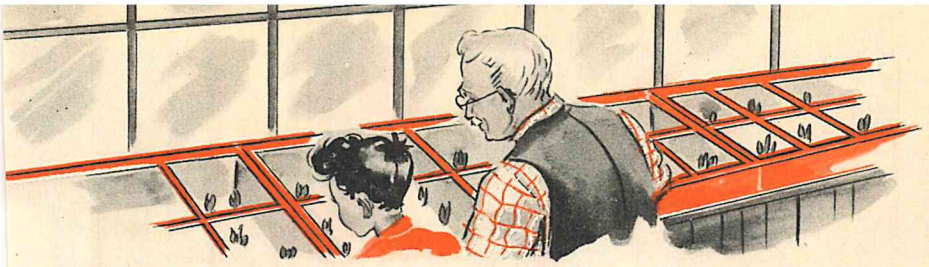
Here are the weights of some third-grade children. The weights are given in pounds; the short way to write "pounds" is **lb.**

Edith	69 lb.	Tom	73 lb.	Ada	65 lb.
Jane	55 lb.	Harry	57 lb.	Sam	86 lb.
Rose	46 lb.	Ray	79 lb.	Beth	41 lb.

1. Which child is heaviest?
2. Which child is lightest?
3. Tom is how many pounds heavier than Harry?
4. Sam is how many pounds heavier than Ada?
5. If Edith and Jane both stood on the scales at the same time, what weight would the scales show?
6. If Tom, Harry, and Ray all stood on the scales at the same time, what weight would the scales show?
7. Make a list of ten things that you buy by the pound.
8. Find something that weighs about one pound.







Raising Tomato Plants

1. Tom's grandfather raised nine thousand five hundred seventy-five little tomato plants. Write this number in figures.

2. Grandfather put 525 little tomato plants in a box and marked them "For Sale." He sold 384 plants the first day. How many were left in the box?

3. Tom helped sell the plants. He sold 48 plants to the first buyer, 60 plants to the second buyer, and 96 to the last. How many plants did he sell in all?

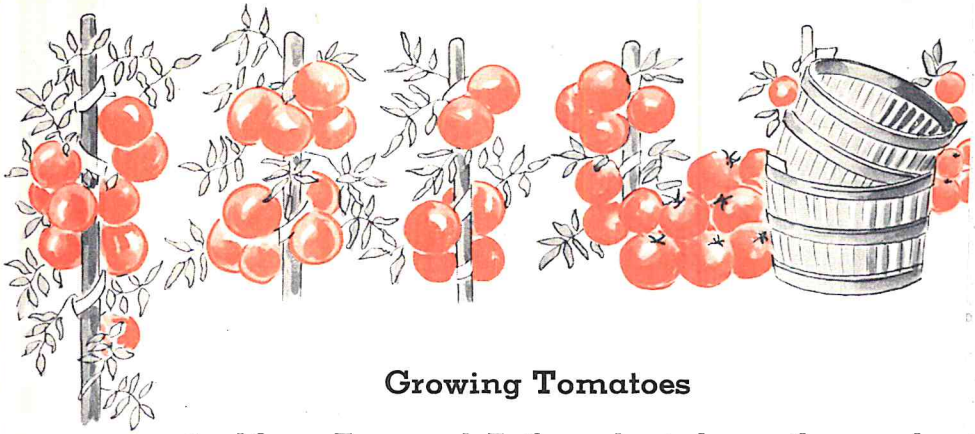
4. Grandfather put 657 plants in small bundles to sell the next day. The next day he found that 288 of the plants had died. How many were alive?

5. Tom again helped to sell. He sold 12 plants, 36 plants, 24 plants, and 60 plants. How many did he sell in all?

6. Tom said he was paid \$.25, \$.75, \$.50, and \$1.25 for the plants he sold. How much did he get for all the plants?

7. Help Grandfather add his sales.

Monday	Tuesday	Wednesday	Thursday	Friday
\$3.25	\$2.55	\$3.50	\$ .75	\$ .25
6.00	1.75	.50	3.75	1.25
.50	.50	2.75	1.75	4.25



Growing Tomatoes

1. Mary, Tom, and Father planted one thousand five hundred twenty-five tomato plants which Grandfather gave to them. Write this number in figures.

2. Tom planted 48 plants in one row, 96 plants in the second row, and 108 plants in the third row. How many did he plant in all?

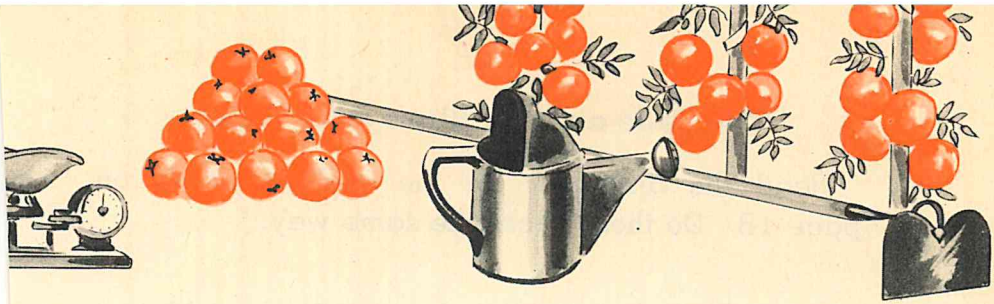
3. Father finished Tom's rows. Father planted 77 plants, 29 plants, and 17 plants. How many did he plant in these rows?

4. Mary helped Tom and Father with the other rows. Add and find how many plants they put in each row.

Fourth Row	Fifth Row	Sixth Row	Seventh Row
111 plants	66 plants	9 plants	56 plants
6 plants	32 plants	101 plants	6 plants
8 plants	27 plants	15 plants	63 plants

5. What do you notice about the number of plants in each row that Tom, Father, and Mary planted?

6. Tom carried water for 369 plants. Father brought water for 1156 plants. How many plants were watered?



7. Tom hoed 365 tomato plants. Mary hoed 89. How many more did Tom hoe than Mary?

8. Father bought 650 tomato sticks from one lumber man and 875 sticks from another. How many sticks did he buy? Is this enough sticks for all the plants? How do you know? Why do we tie tomato plants to sticks?

9. Each tomato stick was 4 ft. long. Father pounded each stick 1 ft. into the ground near a plant. How many feet of each stick were above the ground?

10. Mary tied 388 plants to the sticks. Tom tied up 438 plants. Father tied 699 plants. Did this take care of all of the 1525 tomato plants? How can you tell?

11. Father picked 25 bushels of tomatoes. Mary picked 9 bushels. How many more did Father pick?

12. Tom sold tomatoes to four persons. He sold 5 lb., 12 lb., 20 lb., and 3 lb. How many pounds did he sell in all?

13. One man bought a bushel of tomatoes costing $2.25. He gave Tom $5.00. How will Tom find how much change to give him? How much change did he give the man?

The Reds and the Blues Race Again

Read the directions for the addition races on page 18. Do these races the same way.

Race 1. Write the remainders quickly.

1.	762	345	631	843	580
	334	127	215	526	234
2.	492	783	673	784	635
	157	338	249	255	218

Race 2. Write the remainders quickly.

1.	531	684	593	876	547
	118	349	247	329	418
2.	334	781	946	645	594
	115	437	529	328	246

Race 3. Write the remainders quickly.

1.	439	538	743	580	943
	256	382	251	191	552
2.	648	559	928	775	857
	252	380	364	283	486

Race 4. Write the remainders quickly.

1.	637	432	459	836	522
	454	272	178	640	241
2.	369	451	945	482	978
	175	271	633	291	784
3.	613	424	794	632	737
	321	182	458	251	565

Race 5. Write the remainders quickly.

1.	423	572	843	876	431
	173	281	450	349	292
2.	579	630	506	962	361
	184	137	209	385	182
3.	473	751	450	654	739
	62	80	28	87	59

Race 6. Write the remainders quickly.

1.	732	648	584	886	954
	415	229	267	548	626
2.	534	749	854	479	607
	282	364	460	283	244
3.	537	618	724	415	300
	442	85	656	67	216

Stop

Using Subtraction

1. Tom helped in his father's store. Find how much change he must give to Mrs. Brown if she spent $1.25 and gave Tom $2.00.

2. Here are some examples showing the change that Tom gave to different persons. Subtract each one and see if he gave the right change.

$5.00	$1.50	$2.75	$4.50	$3.00	$1.00
4.35	1.40	2.56	4.34	2.01	.79
$ .65	$ .10	$ .19	$ .16	$ .99	$ .21

Find how much change each person got back in these examples:

3.	$3.50	$1.75	$4.25	$5.00	$9.50	$5.75
	3.25	1.52	4.10	4.65	9.35	5.60
4.	$1.50	$2.50	$1.90	$7.50	$8.25	$9.75
	1.35	2.13	1.87	7.36	8.10	9.73

5. Tom's father had $9.94 in his pocket. He paid a bill that was $3.75. How much did he have left in his pocket?

6. He had $8.65 in the safe. He took $5.35 to pay another bill. How much was there left?

7. Tom's father paid him $1.50 for helping that day. If his father had $5.75 before paying Tom, how much did he have left after paying him?

Because Tom had worked like a beaver in his arithmetic class, he was able to help his father. Are you working as hard as Tom? If you are a busy beaver, the next page will be fun.

A Page for Busy Beavers

Use folded paper. Write only the answers.

Add.

1.	9	8	3	74	83	546	698
	6	7	8	69	46	730	747
2.	7	9	8	57	44	281	789
	5	4	3	84	63	613	467
	6	5	7	98	28	379	246

Subtract.

3.	9	7	6	49	54	384	769
	4	2	5	33	24	140	535
4.	17	15	13	129	168	637	929
	9	6	7	42	95	243	555
5.	22	35	44	51	60	631	753
	4	9	7	8	3	129	424

If you made more than five mistakes, your arithmetic wall needs some mending. Page 174 gives many helps that will make a stronger wall.

If you made five or fewer mistakes, be a beaver builder and make a higher wall. Page 175 will help you.

Patching Up the Wall

1. Can you say the 100 addition facts in 3 minutes? (Pages 66, 106, 122, 154, 155)

2. Can you add by endings quickly? (102, 104, 105, 156)

3. Can you add single columns quickly? (17, 54, 55, 103, 107, 157)

4. Can you add with carrying? (88, 108, 109, 111, 125, 128, 129, 130, 131, 158)

5. Do you copy numbers neatly in straight columns? (54, 118, 160)

6. Can you check addition? (57, 112)

7. Can you say the 100 subtraction facts in 3 minutes? (67, 114, 136, 137, 161)

8. Can you subtract with borrowing? (90, 138, 162–165)

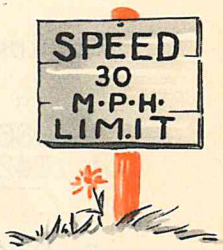
9. Can you check subtraction? (115, 136)

10. Choose a beaver partner. Run the six races on pages 170–171. See how many you can win.

11. Add and check.

4	8	1	76	83	460
9	7	4	43	9	26
8	0	5	8	45	34
7	1	9	32	8	9

A Page for Beaver Builders



You would lay 5,280 foot rulers in a row to make 1 mile. One mile is 5,280 feet long.

1. Can you and your teacher think of a place that is about one mile from school?

2. When you see a road sign that says, "Speed, 30 M.P.H.," what does it mean?

3. About how long does it take to walk 1 mile?

4. How many miles an hour is a safe speed to drive in an automobile past your school house.

5. Think of someone who lives in a far-away city. How many miles is it from your home to this city?

6. Does an airplane ever go 1 mile up into the air?

7. Name some different kinds of airplanes and tell about how many miles an hour each can fly.

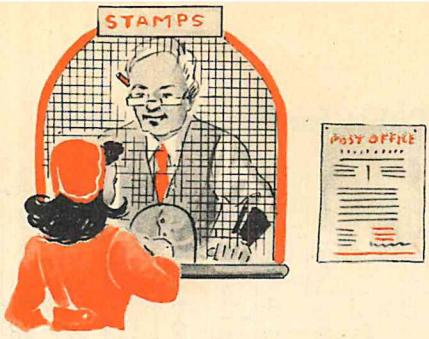
8. The speedometer on an automobile tells how far the automobile has been driven. Look at the speedometer on some friend's car. Draw a picture of it on the blackboard. Make it show 8,790 miles.

9. Mr. Brown drove his car 35 miles per hour on a trip. Mr. Jones drove 48 miles per hour. How much faster did Mr. Jones drive per hour?

Swimming Along

Subtract and check.

	a	b	c	d	e	f	g
1.	386	475	898	267	969	758	497
	142	321	543	130	622	331	135
2.	839	538	746	967	388	842	774
	423	332	641	264	337	421	352
3.	563	627	341	855	672	692	333
	146	319	127	528	146	253	124
4.	125	144	133	162	119	133	156
	62	83	50	91	47	53	82
5.	631	843	762	535	382	942	726
	215	324	417	516	35	306	242
6.	318	820	534	629	714	638	841
	145	360	471	84	360	159	352
7.	525	734	463	600	327	765	433
	258	675	99	252	242	91	28



Learning to Multiply with 2's

Jane bought three 2-cent stamps. There are two ways she can find out how much they cost.

She can write **2¢** three times in a column and add. She will find the sum is **6¢**.

Or, she can think, "Three times 2 cents make 6 cents." She could write what she thinks like this: **3×2¢=6¢.**

Add or Multiply

2¢
2¢
2¢
6¢

2¢
x3
6¢

The sign × means **times** or **is multiplied by.** When you multiply, the answer is called the **product.**

The sign = means **equals** or **is equal to.**

If Jane had bought five 2-cent stamps, she could write **2¢** five times in a column and add the column. She would find the sum to be **10¢**.

She could get the same answer by multiplying 2 cents by 5. The product would be 10 cents.

Add or Multiply

2¢
2¢
2¢
2¢
2¢
10¢

2¢
x5
10¢

Table for Multiplying 2's

	2	2	2	2	2	2	2	2	2
1×2 = 2	2	2	2	2	2	2	2	2	2
2×2 = 4	2	2	2	2	2	2	2	2	2
3×2 = 6	2	2	2	2	2	2	2	2	2
4×2 = 8	2	2	2	2	2	2	2	2	2
5×2 = 10	2	2	2	2	2	2	2	2	2
6×2 = 12	2	2	2	2	2	2	2	2	2
7×2 = 14	2	2	2	2	2	2	2	2	2
8×2 = 16	2	2	2	2	2	2	2	2	2
9×2 = 18	2	2	2	2	2	2	2	2	2

1. Joe learns 2 spelling words each day. How many spelling words will he learn in 4 days? In 7 days?

2. The teacher puts 2 sheets of paper on each desk. How many sheets does she put on 3 desks? On 8 desks?

3. There are 2 children sitting in each seat. How many children are there in 5 seats? In 9 seats?

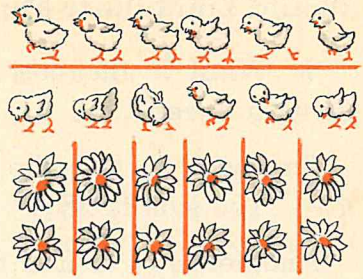
4. Jack gave 2 pieces of candy to each boy. How many pieces did he give to 2 boys? To 6 boys?

5. A candy bar costs 2 cents. What must I pay for 5 candy bars? For 7 candy bars? For 9 candy bars?

6. Tommy put 2 pennies in each pocket. How many pennies did he put in 4 pockets?

7. Jerry paid 2 cents for each big marble. How much did he pay for 7 big marbles? For 4 big marbles? For 6 big marbles?

Multiplying by 2



Which of the pictures do you use to show that $6 \times 2 = 12$?

Which of the pictures do you use to show that $2 \times 6 = 12$?

Draw a picture to show that $4 \times 2 = 8$.

Draw another picture to show that $2 \times 4 = 8$.

If $7 \times 2 = 14$, how much is 2×7?

Study the multiplication facts in the table below until you can say them quickly. Read the first one, "Two times one are two." Read the second, "Two times two are four."

$2 \times 1 = 2$	$2 \times 4 = 8$	$2 \times 7 = 14$
$2 \times 2 = 4$	$2 \times 5 = 10$	$2 \times 8 = 16$
$2 \times 3 = 6$	$2 \times 6 = 12$	$2 \times 9 = 18$

1. Large candy bars cost 9 cents. What is the cost of 2 large candy bars?

2. Grace has 6 sheets of paper and tears each in two. How many pieces does she have then?

3. Mary writes 8 problems on a page. How many problems can she write on 2 pages?

Sue said, "A donkey has 0 wings. How many wings will 2 donkeys have?"

Jack answered right. He said, "Two donkeys have 0 wings."

Any number times 0 is 0, and 0 times any number is 0.

$2 \times 0 = 0$
$0 \times 2 = 0$

Would You Like to Multiply Long Numbers by 2?

1. What is the cost of 2 dozen oranges at 43 cents a dozen?

One way to find the answer is to add 43¢ and 43¢. The sum is 86¢.

Another way to find the answer is to multiply 43¢ by 2. The product is 86¢.

Add or Multiply

43¢	43¢
43¢	×2
86¢	86¢

When you multiply 43 by 2, you think 2 times 3 are 6 and write **6** under the 3. Then, think 2 times 4 are 8 and write **8** under the 4.

2. Multiply 134 by 2. Check by adding.

To multiply, think 2 times 4 are 8 and write **8** under 4.

Think 2 times 3 are 6 and write **6** under 3.

Think 2 times 1 are 2 and write **2** under 1.

Multiply Check

134	134
×2	134
268	268

Multiply and check by adding.

3.

34	23	42	13	423	341	242
×2	×2	×2	×2	×2	×2	×2

4.

20	31	24	44	330	401	123
×2	×2	×2	×2	×2	×2	×2

Using Multiplication in the Garden

1. Mary planted 42 seeds of corn in a row. How many seeds did she plant in 2 rows?

2. Billy put 23 pepper plants in a row. How many did he plant in 2 rows?

3. Mary had two boxes of strawberry plants. If there were 342 plants in each box, how many were there in both boxes?

4. Billy put in 2 rows of tomato sticks. If he put 212 in a row, how many did he put in both rows?

5. Mary had 2 bundles of cabbage plants. If there were 200 plants in each bundle, how many were there in both bundles?

These exercises will make strong beavers. Do each exercise as fast as you can work well.

6.	124 ×2	312 ×2	331 ×2	244 ×2	323 ×2	313 ×2
7.	243 ×2	412 ×2	243 ×2	433 ×2	114 ×2	241 ×2
8.	424 ×2	321 ×2	444 ×2	224 ×2	334 ×2	413 ×2

Using Multiplication at School

1. If there are 312 pages in a book, how many pages will there be in 2 of these books?

2. If the teacher gives each child 24 pages to make a workbook, how many pages will she give to 2 children?

3. There are 144 sheets of colored paper in a package. How many sheets will there be in 2 packages?

4. The teacher put 124 sheets of colored paper in each stack. How many sheets were in 2 stacks?

5. The children played a game. If there were 2 sides and 14 children on each side, how many were playing the game?

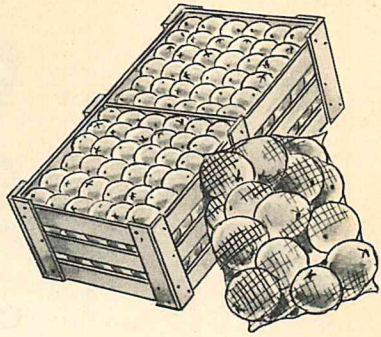
6. The children passed into the school in two long lines. If there were 423 children in each line, how many children went into the school?

7. Two classes went to play in the park. If there were 42 children in each class, how many went to the park?

Copy and multiply. Check by adding.

8.	223 ×2	232 ×2	342 ×2	212 ×2	344 ×2	300 ×2	404 ×2
9.	234 ×2	414 ×2	432 ×2	441 ×2	144 ×2	134 ×2	403 ×2
10.	333 ×2	231 ×2	421 ×2	133 ×2	200 ×2	304 ×2	434 ×2

This Is Multiplication with Carrying



1. What is the cost of 2 dozen oranges at 48 cents a dozen?

To find the cost, multiply 48 cents by 2. You may check by adding.

Think 2 times 8 are 16. Write **6** under the 8, and carry 1.

Think 2 times 4 are 8 and 1 (carried) make 9. Write **9** under the 4. The answer is **96¢**.

Multiply	Check
48¢	48¢
×2	48¢
96¢	96¢

2. If there are 96 apples in one box, how many apples are there in 2 boxes?

Think, 2 times 6 are 12. Write **2** under 6, and carry 1.

Think 2 times 9 are 18 and 1 (carried) make 19. Write **19** as shown. The answer is **192**.

Multiply	Check
96	96
×2	96
192	192

Copy and multiply. Check by adding.

	a	b	c	d	e	f	g	h
3.	46 ×2	39 ×2	27 ×2	18 ×2	47 ×2	26 ×2	35 ×2	58 ×2
4.	67 ×2	86 ×2	59 ×2	78 ×2	87 ×2	57 ×2	68 ×2	66 ×2
5.	70 ×2	88 ×2	97 ×2	50 ×2	89 ×2	55 ×2	76 ×2	59 ×2

STOP

On a Sheep Ranch

1. Jim visited his Uncle Larry in Montana. His uncle has a sheep ranch. Jim saw 341 sheep waiting to be sheared and 2 times as many that had been sheared. How many had been sheared?

2. Tell the class what is meant by "shearing sheep." What is done with this wool? Can you see any wool in your classroom?

3. Last winter 16 men helped Uncle Larry. Next winter he will need two times as many helpers. How many men will he have next winter?

4. Last winter 432 of Uncle Larry's sheep died in the cold weather. He lost twice as many the winter before. How many did he lose the winter before?

5. One man sheared 320 sheep in one day. How many can he shear in 2 days?

6. The wool from one sheep weighed about 8 lb. How much will the wool from 2 sheep weigh?

7. If Uncle Larry can sell the wool at 43¢ a pound, how much will he get for 2 lb.?

8. One man sheared 3,078 lb. of wool in one day. The next day he sheared 5,644 lb. How much did he shear in both days together?

Multiplying Three-Figure Numbers

1. It is 349 miles to the town where Jack's uncle lives. How many miles does Jack travel if he goes to visit his uncle and comes back home?

To find the answer, multiply 349 by 2.

Think 2 times 9 are 18. Write **8** under 9 and carry 1.

Think 2 times 4 are 8 and 1 (carried) make 9. Write **9** under 4.

Think 2 times 3 are 6. Write **6** under 3. The answer is **698**.

Multiply	*Check*
349	349
x2	349
698	698

2. Multiply and check.

237	418	329	136	225	309	338
×2	×2	×2	×2	×2	×2	×2

3. Multiply 473 by 2. Check.

Think 2 times 3 are 6. Write **6** under 3.

Think 2 times 7 are 14. Write **4** under 7 and carry 1.

Think 2 times 4 are 8 and 1 (carried) make 9. Write **9** under 4. The product is **946**.

Multiply	*Check*
473	473
x2	473
946	946

Carrying Twice in Multiplication

1. Multiply.

238	382	437	374	139	391
×2	×2	×2	×2	×2	×2

In which of the multiplications above did you carry in ones place? In which did you carry in tens place?

In some multiplications, you will need to carry in ones place and also in tens place.

2. Multiply 369 by 2. Check.

Think 2 times 9 are 18. Write **8** under 9, and carry 1.

Think 2 times 6 are 12 and 1 (carried) make 13. Write **3** under 6 and carry 1.

Think 2 times 3 are 6 and 1 (carried) make 7. Write **7** under 3. The product is **738.**

Multiply	*Check*
369	*369*
x2	*369*
738	*738*

Multiply. Check.

	a	b	c	d	e	f	g
3.	278	397	468	385	197	256	457
	×2	×2	×2	×2	×2	×2	×2
4.	377	296	489	177	388	376	495
	×2	×2	×2	×2	×2	×2	×2

Multiplying Dollars and Cents by 2

1. Mr. King bought 2 bushels of peaches at $1.75 a bushel. How much did the 2 bushels cost?

Think 2 times 5 are 10. Write **0** under 5 and carry 1.

Think 2 times 7 are 14 and 1 (carried) are 15. Write **5** under 7 and carry 1.

Think 2 times 1 are 2 and 1 (carried) make 3. Write **3** under 1.

The answer is **$3.50.**

Multiply	*Check*
$1.75	*$1.75*
x2	*1.75*
$3.50	*$3.50*

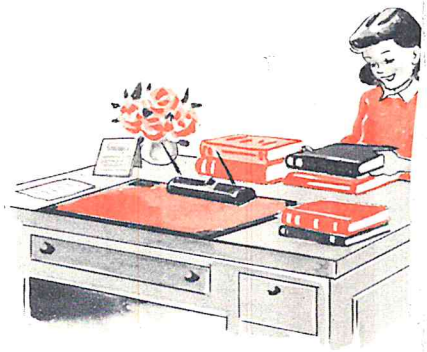
Notice that a dollar sign is written before the answer. Notice, too, that the cents point of $3.50 is exactly under the cents point of $1.75.

Multiply. Check.

	a	b	c	d	e	f
2.	$3.38 ×2	$2.70 ×2	$1.92 ×2	$4.16 ×2	$3.78 ×2	$2.69 ×2
3.	$3.49 ×2	$2.98 ×2	$4.67 ×2	$1.56 ×2	$3.39 ×2	$4.82 ×2
4.	$0.35 ×2	$0.62 ×2	$0.75 ×2	$0.93 ×2	$0.59 ×2	$0.98 ×2

do this tonight

This Page Will Teach You How to Divide by 2



1. Mary put 6 books on the teacher's desk. The teacher said, "Divide the stack into 2's." How many stacks of 2's did Mary get?

Mary made 3 stacks of 2's, for $3 \times 2 = 6$.

2. Say the number that belongs in place of each $*$.

$*\times 2=6$ $*\times 2=10$ $*\times 2=18$ $*\times 2=12$

$*\times 2=4$ $*\times 2=8$ $*\times 2=16$ $*\times 2=14$

$*\times 2=0$ $*\times 2=2$

3. Put 8 books on the desk and divide them into stacks of 2's. How many stacks are there?

4. Put 14 books on the desk and divide them into stacks of 2's. How many stacks are there?

5. How many 2's are there in 10?

When you find how many times one number is contained in another number, you are **dividing.**

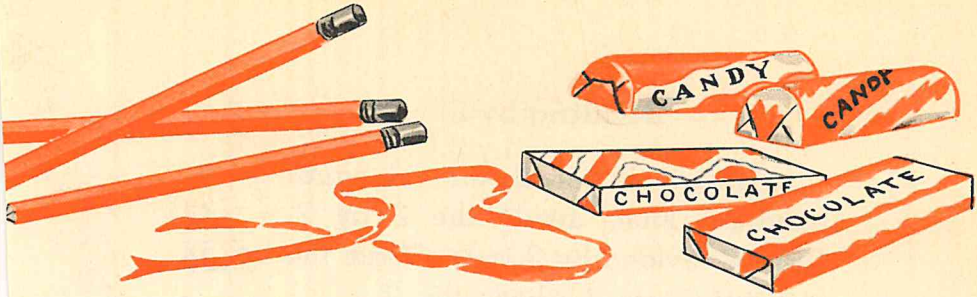
To show that you divide 12 by 2, write your example in this way. ⟶ $2\overline{)12}^{\,6}$

The sign $)\overline{}$ means that you are to divide the number inside by the number at the left.

Study these division facts.

6. $2\overline{)6}^{\,3}$ $2\overline{)8}^{\,4}$ $2\overline{)4}^{\,2}$ $2\overline{)10}^{\,5}$ $2\overline{)0}^{\,0}$

7. $2\overline{)2}^{\,1}$ $2\overline{)14}^{\,7}$ $2\overline{)12}^{\,6}$ $2\overline{)18}^{\,9}$ $2\overline{)16}^{\,8}$



Another Way to Show Division

Sometimes we write "divided by" a different way, with the sign ÷. Study the division facts in the table. Read the first one, "4 divided by 2 is 2."

$4 \div 2 = 2$	$10 \div 2 = 5$	$12 \div 2 = 6$
$8 \div 2 = 4$	$14 \div 2 = 7$	$2 \div 2 = 1$
$6 \div 2 = 3$	$18 \div 2 = 9$	$16 \div 2 = 8$

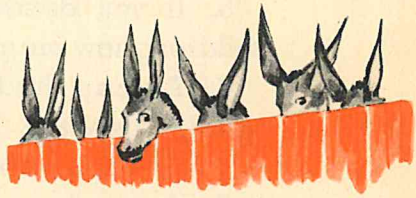
The answer you get when you divide is called the **quotient.**

1. Pencils cost 2 cents each. How many pencils can you buy for 6 cents?

2. Mrs. Brown sent 18 socks to the laundry. How many pairs of socks did she send?

3. Name as many things as you can that come in 2's or pairs.

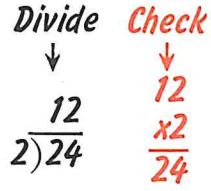
4. Roy saw 12 long ears sticking above the fence. How many donkeys do you think were standing behind the fence?



5. How many pieces of ribbon 2 inches long can be cut from a piece of ribbon 10 inches long?

6. Small chocolate bars cost 2 cents each. How many small chocolate bars can you buy for 8 cents?

Dividing by 2



1. Divide 24 pencils into two equal bundles. First, divide the 2 by 2. Think 2 divided by 2 is 1. Write the quotient figure **1** above the 2.

Next, divide the 4 by 2. Think 4 divided by 2 is 2. Write the quotient figure **2** above the 4.

The complete quotient is **12**. Check your division by multiplying as shown.

2. Choose another child to be your partner. Copy and divide. Change papers. Check each other's paper by multiplying.

$2\overline{)24}$ $2\overline{)42}$ $2\overline{)46}$ $2\overline{)82}$ $2\overline{)64}$ $2\overline{)28}$ $2\overline{)66}$

$2\overline{)44}$ $2\overline{)68}$ $2\overline{)64}$ $2\overline{)26}$ $2\overline{)20}$ $2\overline{)60}$ $2\overline{)86}$

3. Race with your partner Copy. Divide and check.

$2\overline{)68}$ $2\overline{)48}$ $2\overline{)84}$ $2\overline{)88}$ $2\overline{)40}$ $2\overline{)80}$ $2\overline{)22}$

4. Divide 48 sticks into two equal piles. How many sticks will there be in each pile?

5. If you divide 12 cookies equally between 2 children, how many cookies will you give each child?

6. A man had 20 pennies. He divided them equally between his 2 children. How many pennies did each child get?

7. A teacher divided 48 children equally into two classes. How many children were in each class?

8. To play a game the teacher divided 42 children equally into 2 teams. How many children were on each team?

At the Store

14¢
2)28¢

1. I paid 28 cents for 2 quarts of milk. What did 1 quart cost?

2. If 2 melons cost 46 cents, what does 1 melon cost?

3. The grocer cut a 60-pound melon into two equal parts. How much did each part weigh?

4. John paid 10 cents for 2 sticks of candy. What did 1 stick cost?

5. Mary bought 2 boxes of matches for 10 cents. How much did 1 box cost?

6. Tom bought 48 oranges. The grocer divided them equally in two bags. How many oranges were there in each bag?

7. The grocer put 84 pounds of sugar in 2-pound bags. How many bags did he need?

8. He then put 48 pounds of cookies in 2-pound bags. How many bags of cookies did he have?

9. There were 84 pounds of candy in a pail. How many 2-pound bags can be filled from the candy pail?

10. A cheese weighed 24 pounds. He cut it into two equal pieces. How much did each piece weigh?

11. Another cheese weighed 16 pounds. He divided it equally between 2 persons. How many pounds did each buy?

12. Two persons wanted to buy sugar. He had only 26 pounds left. If he divided it equally between them, how many pounds did each person buy?

Dividing Longer Numbers by 2

1. Divide 468 by 2. Check.

Divide ↓ 234 / 2)468

Check ↓ 234 x2 / 468

First, divide the 4 by 2. Think 4 divided by 2 is 2. Write the quotient figure **2** above 4.

Next, divide the 6 by 2. Think 6 divided by 2 is 3. Write the quotient figure **3** above 6.

Next, divide the 8 by 2. Think 8 divided by 2 is 4. Write the quotient figure **4** above 8.

The complete quotient is **234**. You check division by multiplying as shown.

Divide and check.

	a	b	c	d	e
2.	2)226	2)428	2)484	2)642	2)860
3.	2)284	2)446	2)628	2)268	2)204
4.	2)424	2)466	2)482	2)448	2)206
5.	2)264	2)642	2)680	2)408	2)864
6.	2)400	2)620	2)808	2)248	2)648

7. A grocer has 18 pounds of brown sugar which he is putting into 2-pound bags. How many bags will there be?

8. How many 2-cent stamps can you buy for 10 cents?

9. Ruth divided 10 cookies into 2 equal piles. How many cookies were in each pile? Draw a picture to show the division.

More About Dividing

There are five 2's in 10, and there are two 5's in 10.

$5 \times 2 = 10$, $2 \times 5 = 10$ $\quad$ $10 \div 2 = 5$, $10 \div 5 = 2$

A division fact may be written $18 \div 2 = 9$, or $2\overline{)18}^{\,9}$. Write each of the division facts on page 189 both ways.

1. Study these division facts until you know them.

$2 \div 1 = 2$	$8 \div 4 = 2$	$14 \div 7 = 2$
$4 \div 2 = 2$	$10 \div 5 = 2$	$16 \div 8 = 2$
$6 \div 3 = 2$	$12 \div 6 = 2$	$18 \div 9 = 2$

2. Say or write the quotients.

$4\overline{)8}$	$8\overline{)16}$	$6\overline{)12}$	$3\overline{)6}$	$9\overline{)18}$
$5\overline{)10}$	$7\overline{)14}$	$2\overline{)16}$	$2\overline{)48}$	$2\overline{)86}$

When you divide any number, except 0, by itself, the quotient is 1.

3. Say or write the quotients.

$3 \div 3$ $\quad$ $7 \div 7$ $\quad$ $9 \div 9$ $\quad$ $5 \div 5$ $\quad$ $8 \div 8$

When you divide 0 by any number, the quotient is 0.

4. Say or write the quotients.

$0 \div 4$ $\quad$ $0 \div 9$ $\quad$ $0 \div 7$ $\quad$ $0 \div 5$ $\quad$ $0 \div 3$

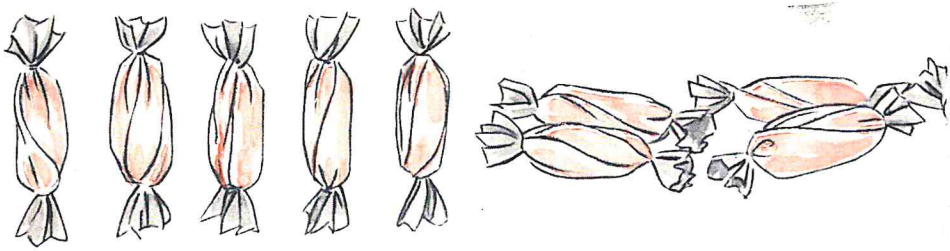
When you divide any number by 1, the quotient is the same as the number that is divided.

5. Say or write the quotients.

$7 \div 1$ $\quad$ $9 \div 1$ $\quad$ $3 \div 1$ $\quad$ $8 \div 1$ $\quad$ $0 \div 1$

Say or write the quotients below. Check.

6. $4\overline{)40}$ $\quad$ $7\overline{)140}$ $\quad$ $5\overline{)105}$ $\quad$ $2\overline{)168}$ $\quad$ $9\overline{)180}$



Some Dividing Does Not Come Out Even

Tommy had 5 candy kisses. He put them in piles of 2's. How many piles were there? How many kisses were left over?

$$2\overline{)5} \quad 2 \text{ r } 1$$

The number which is left over in dividing is called the **remainder**. In Tommy's example, the letter **r** means remainder.

Study these divisions with remainders.

1. $2\overline{)9}\ 4\text{ r }1$ $\quad 2\overline{)7}\ 3\text{ r }1$ $\quad 2\overline{)13}\ 6\text{ r }1$ $\quad 2\overline{)17}\ 8\text{ r }1$

2. $2\overline{)15}\ 7\text{ r }1$ $\quad 2\overline{)11}\ 5\text{ r }1$ $\quad 2\overline{)3}\ 1\text{ r }1$ $\quad 2\overline{)19}\ 9\text{ r }1$

Copy. Write the quotients and remainders.

3. $2\overline{)43}$ $\quad 2\overline{)67}$ $\quad 2\overline{)29}$ $\quad 2\overline{)83}$ $\quad 2\overline{)85}$

4. $2\overline{)247}$ $\quad 2\overline{)683}$ $\quad 2\overline{)825}$ $\quad 2\overline{)649}$ $\quad 2\overline{)69}$

5. How many 2-cent stamps can you buy for 25 cents, and how much will be left over?

6. At 2¢ each, how many cakes can I buy for 15¢, and how much will I have left over?

7. The teacher has a piece of rope 9 feet long. How many 4-foot jumping ropes can she make, and how much rope will be left over?

Dividing Dollars and Cents Is Very Grown-Up

1. Mr. Clark divided $2.40 between May and Sue so that each girl had the same. How much did each get?

To find the answer, you divide $2.40 by 2.

To check, multiply $1.20 by 2.

Divide and check.

Divide

$$2\overline{)\$2.40} \quad \$1.20$$

Check

$\$1.20 \times 2 = \$2.40$

2. $2\overline{)\$4.64}$ $2\overline{)\$6.80}$ $2\overline{)\$8.48}$ $2\overline{)\$4.00}$

3. $2\overline{)\$4.40}$ $2\overline{)\$2.68}$ $2\overline{)\$6.24}$ $2\overline{)\$8.84}$

4. Mr. May divided $1.48 between Jack and Dick so that each boy had the same. How much did each get?

There are no 2's in 1, so you find how many 2's in 14. There are 7 2's in 14. Write the 7 above 4. There are 4 2's in 8. Write the **4** above 8.

Divide

$$2\overline{)\$1.48} \quad \$0.74$$

Check

$\$0.74 \times 2 = \$1.48$

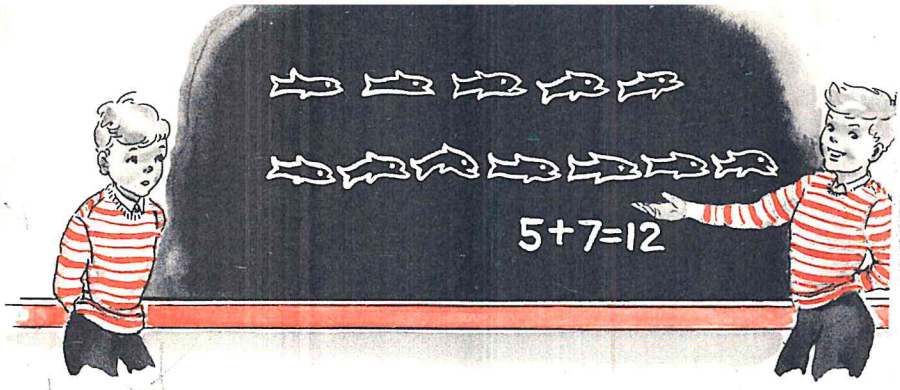
In dividing dollars and cents, remember to write the dollar sign in front of the quotient and to put the cents point in the quotient exactly above the cents point of the number divided.

Divide and check.

5. $2\overline{)\$1.64}$ $2\overline{)\$1.28}$ $2\overline{)\$1.06}$ $2\overline{)\$1.42}$

6. $2\overline{)\$1.80}$ $2\overline{)\$1.20}$ $2\overline{)\$1.68}$ $2\overline{)\$1.08}$

7. Mr. Miles divided $6.40 between Jane and Roy so that each had the same. How much did each get?



Help Elmer Divide

Elmer could never be sure what to do to get the right answer to a problem. Sometimes he added when he should have subtracted; sometimes he subtracted when he should have multiplied; sometimes he multiplied when he should have divided.

Elmer's father told him to draw a picture of what the problem said. Elmer did this. It was easy, then, for him to get the right answer.

Do as Elmer learned to do, and draw a picture for each of these problems.

1. Jack caught 5 fish one day and 7 fish the next day. How many fish did he catch in two days?

2. Jimmy had 15 cents and spent 8 cents of it. How much money did he have then?

3. Sue picked 17 red and yellow flowers. There were 8 red flowers. How many yellow flowers were there?

4. Tommy gave 16 marbles to the twins. How many marbles would each twin have if they each had the same number?

5. Helen invited 7 boys and 6 girls to her party. How many did she invite in all to her party?

6. Ted has 14 tomato plants in a row in his garden. How many does he have in 2 rows?

7. Jane had 9 children at a party. She had 18 cookies. How many cookies should each child have?

8. Joan had 7 books and bought 4 other books. How many books did she have then?

9. Ruth counted 8 blooms on one stalk, 6 blooms on another stalk, and 9 blooms on another stalk. How many blooms did she count on the 3 stalks?

10. A kite costs 15 cents. Tommy has 9 cents. How much more does he need before he can buy the kite?

11. Robert bought 7 Christmas seals and Joan bought 8 Christmas seals. How many Christmas seals did Robert and Joan buy in all?

12. At the Zoo, Ann counted 5 monkeys in one cage, 3 monkeys in another cage, and 7 monkeys in another cage. How many monkeys did she count in all 3 cages?

13. If small chocolate bars cost 2 cents each, how many small chocolate bars can Betty buy with 10 cents?

14. There will be 6 children at a party. Adele wants to give each child two oranges. How many oranges will she need?

15. There were 17 boys and girls at a party. There were 9 girls. How many boys were there?

Call for the Reds and the Blues

Run each race quickly and carefully.

At the end of each race check to find out which team has more papers without any mistakes.

Race 1. Write the sums. To be sure of a perfect paper, check by adding up.

1.

4	6	5	2	0	7
5	2	7	6	9	4
0	1	6	4	8	5
6	8	6	5	9	7

2.

0	5	1	5	6	8
9	0	1	6	4	5
8	7	4	3	9	6
4	3	1	3	2	4
5	7	6	0	8	9

3.

47	53	86	34	18
21	14	50	76	65
17	46	32	54	57

Race 2. Write the sums. Check.

1.

28	93	65	78	33
42	51	43	15	64
57	69	45	38	67
28	60	33	47	28

2.

37	6	42	15	9
7	24	37	9	23
9	4	16	24	49
27	64	9	7	8

3.

347	564	733	981
248	419	187	62
	198		

Race 3. Write the sums. Check.

1.	57	383	481	356	83
	9	29	16	143	21
	63	8	111	83	7
	6	143	98	7	39

2.	$2.25	$4.30	$0.90	$0.38
	1.50	.85	2.45	1.17
	2.00	.38	.09	.54
	.75	1.27	.98	1.38

Race 4. Write the remainders. Check.

1.	12	17	15	13	18
	5	8	7	9	9
2.	13	14	11	37	91
	6	8	5	9	8
3.	27	86	59	28	52
	12	54	7	5	27

Race 5. Write the remainders. Check.

1.	325	679	586	319
	172	289	94	79

2.	$7.59	$4.07	$9.40	$6.84
	5.50	1.49	6.55	4.88

Knowing What to Do

You find the answers to some problems by adding. You find the answers to other problems by subtracting, multiplying, or dividing. To find the right answer, you must know what to do.

Read each problem carefully, and tell what to do to get the right answer. Then read the problem again and find the answer.

1. At 2¢ a glass, how many glasses of lemonade can Jerry buy for 8¢?

2. The children had 48 paper cups in a package. How many paper cups are there in 2 packages?

3. Mary sold 35 cents' worth of candy, and Jack sold 28 cents' worth. How much did both sell?

4. There were 162 squares of candy in a pan. The children sold 37 squares. How many squares were left in the pan?

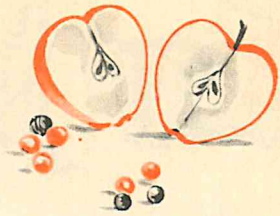
5. There were 29 candy kisses in one box and 33 in another box. Joan put them all in the same box. How many were there in all?

6. Alice and Mary bought 48 pieces of candy. They divided it evenly. How many did each get?

7. Ellen sold 36 cups of lemonade. Mary sold 2 times as much. How much did Mary sell?

8. The children had 96 paper cups and used 59 of them for lemonade. How many cups were left?

Finding One Half of a Number



Ida cut an apple into 2 equal parts. Each part is one half of the apple. One-half is written in figures as $\frac{1}{2}$.

Robert divided 8 marbles into 2 equal piles. One half of the marbles were in each pile; $\frac{1}{2}$ of 8 is 4.

To find one half of a number, divide the number into 2 equal parts. This means you divide the number by 2.

1. Find one half of each of these numbers.

6 18 12 4 16 10 14 8 2 0

2. James had 16 marbles and lost $\frac{1}{2}$ of them. How many did he lose?

3. Sue took 12 pieces of candy to school and gave Adele $\frac{1}{2}$ of them. How many pieces did she give Adele?

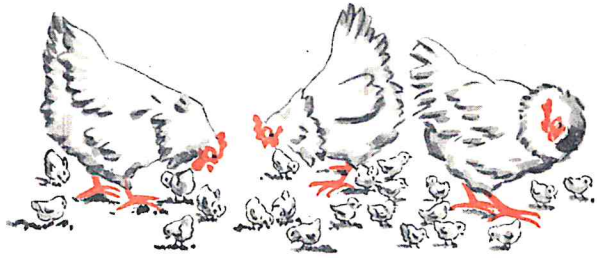
4. Frances picked 18 flowers. One half of them were daisies. How many daisies did Frances pick?

5. Alice picked 16 flowers. One half of them were red. How many red flowers did Alice pick?

Say the answers. Read the first one "One half of 8 is 4."

6.

$\frac{1}{2}\times 8$	$\frac{1}{2}\times 16$	$\frac{1}{2}\times 10$	$\frac{1}{2}\times 12$
$\frac{1}{2}\times 42$	$\frac{1}{2}\times 24$	$\frac{1}{2}\times 48$	$\frac{1}{2}\times 64$
$\frac{1}{2}\times 128$	$\frac{1}{2}\times 166$	$\frac{1}{2}\times 182$	$\frac{1}{2}\times 144$
$\frac{1}{2}\times 286$	$\frac{1}{2}\times 428$	$\frac{1}{2}\times 860$	$\frac{1}{2}\times 402$
$\frac{1}{2}\times 624$	$\frac{1}{2}\times 242$	$\frac{1}{2}\times 480$	$\frac{1}{2}\times 206$
$\frac{1}{2}\times 448$	$\frac{1}{2}\times 482$	$\frac{1}{2}\times 684$	$\frac{1}{2}\times 804$



Helping Grandmother Take Care of the Chickens

1. Grandmother had 148 hens. Half of them were white. How many white hens did she have?

2. She had 248 chicks. If $\frac{1}{2}$ of them were two weeks old, how many two-week-old chicks were there?

3. Grandmother put 18 little sick chicks in a box to keep them warm. Half of them got out of the box. How many chicks did she have to find?

4. There were 24 lb. of chick feed in a sack. Mary gave $\frac{1}{2}$ of this amount to the little chicks. How many pounds did she give them?

5. The big chickens have straw on the floor of their house. Grandmother had 12 bales of straw. She bought 15 bales more. How many bales of straw does she now have for the chickens?

6. Mary found 14 eggs in one nest. Half of these were white. How many white eggs were there?

7. Grandmother gathered 466 eggs in two days. If she got the same number of eggs each day, how many eggs did she get in one day?

8. Grandmother had $1.68 she received for selling eggs. She gave $\frac{1}{2}$ of this to Mary for helping her. How much did she give Mary?

A Page for Busy Beavers

This page will show you how well you are building in multiplication and division.

Write the products.

	a	b	c	d	e	f	g
1.	87 ×2	96 ×2	77 ×2	69 ×2	78 ×2	66 ×2	85 ×2

2.	243 x2	418 x2	382 x2	306 x2	475 x2

3. Divide each of these numbers by 2.

14 6 10 16 2 12 18 8 4 0

4. Write the answers.

$2\overline{)26}$	$2\overline{)48}$	$2\overline{)428}$	$2\overline{)126}$	$2\overline{)162}$
$2\overline{)84}$	$2\overline{)61}$	$2\overline{)148}$	$2\overline{)167}$	$2\overline{)183}$

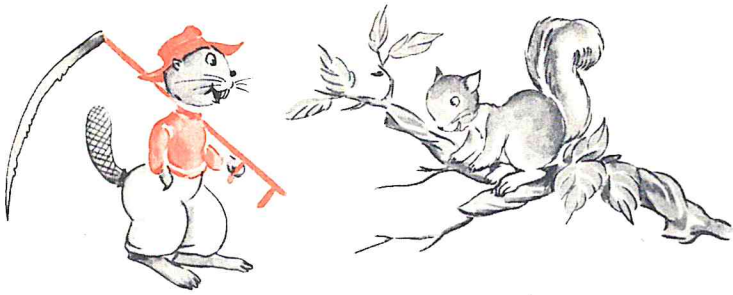
5. Find half of each of these numbers.

8 4 12 2 18 24 48 66

124 160 428 146 604 800

If you made no more than five mistakes, join the beaver builders on page 205.

If you made more than five mistakes, it is time to do some patching so your wall will be strong. Page 204 will help you.



Busy Beavers Will Clear These Number Trails

Do you know the multiplication facts for 2? If you do not, dig in here and study pages 179, 180, and 181. Make a helper card for each fact. Practice with another beaver.

Do you know how to multiply a number by 2 and add 1 to the product? Study these examples. Then cover the answers and begin, "2 times 8 are 16 and 1 makes 17."

$2\times8+1=17$ $2\times4+1=9$ $2\times6+1=13$
$2\times2+1=5$ $2\times7+1=15$ $2\times3+1=7$
$2\times1+1=3$ $2\times5+1=11$ $2\times9+1=19$

Do you know how to multiply longer numbers? Practice on pages 182, 184, 185, 186.

Do you know the division facts for 2? Practice on pages 188 and 189.

Do you know how to divide larger numbers by 2? Practice on pages 190, 191 and 192.

Can you divide and find the right answer when there is a remainder? Study page 194.

A Page for Beaver Builders

Work with another pupil and answer these.

1. What does the sign + mean, and how do you use it?

2. What does the sign − mean, and how do you use it?

3. What does the sign × mean, and how do you use it?

4. What does the sign ÷ mean, and how do you use it?

Say the answers quickly.

5.	6+3	5−2	2×6	8÷4	8+2
6.	4×2	18÷2	7+5	10−7	14÷2
7.	12÷2	4+8	12−7	7+9	15−9
8.	17−8	9×2	16÷2	2×8	9×2

Say the missing numbers quickly.

9.	?÷2=6	2×?=16	5+?=11	?−8=6
10.	2×?=18	?+7=9	?−7=9	?÷2=8
11.	5+?=18	?×2=4	?÷2=4	18−?=5
12.	4+?=13	17−?=9	16÷?=2	7×?=14

This is tricky. Think. Draw a picture to help.

13. Betty has a ribbon 12 inches long. She wants to cut it into pieces 2 inches long. How many cuts will she need to make?

Easy Swimming

Write all answers on paper. Check each answer to be sure you are right.

Divide by 2.

1. 12 16 14 2 18 6 10 4 8

2. 11 17 7 13 19 9 1 15 5

3. Multiply by 2.

13 38 34 46 57 42 69 21 79

4. Divide by 2.

24 64 126 168 82 180 148 486

Write the products.

5. 36×2 83×2 91×2 70×2 236×2 374×2 182×2

6. 16×2 32×2 27×2 84×2 349×2 278×2 257×2

Write the quotients.

7. $2\overline{)126}$ $2\overline{)484}$ $2\overline{)860}$ $2\overline{)148}$ $2\overline{)402}$

8. $2\overline{)642}$ $2\overline{)824}$ $2\overline{)402}$ $2\overline{)164}$ $2\overline{)124}$

Write the answers.

9. 2×8 7×2 $18 \div 2$ $10 \div 2$ $12 + 5$

10. $\frac{1}{2} \times 2$ $\frac{1}{2} \times 18$ $\frac{1}{2} \times 14$ $\frac{1}{2} \times 16$ $\frac{1}{2} \times 10$

Learning Our Threes from a Three-Leaf Clover

1. There are 3 little clover leaves on each leaf stem. How many leaves are there on 2 leaf stems? Draw a picture to prove your answer.

One way to find the answer is to add. The sum of 3 and 3 is 6.

Another way is to multiply 3 by 2. The product is 6.

Add	Multiply
3	3
3	x2
6	6

2. Ella picked 4 clover-leaf stems. How many little leaves were there on the 4 stems? Tell two ways she can find the answer.

3. How many little leaves are there on 3 clover-leaf stems? On 6 clover-leaf stems? On 7 clover leaf stems?

4. Count by 3's to 27. Begin 3, 6, 9, . . .

STOP

Learning the 3's in Multiplication

Study these 3-facts until you can say them quickly. Make a helper card for any one that is hard for you.

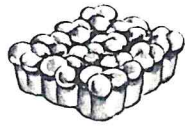
$1 \times 3 = 3$	$4 \times 3 = 12$	$7 \times 3 = 21$
$2 \times 3 = 6$	$5 \times 3 = 15$	$8 \times 3 = 24$
$3 \times 3 = 9$	$6 \times 3 = 18$	$9 \times 3 = 27$

1. Multiply 3 by each number below. Say the products quickly. A slow answer is almost as bad as a wrong answer. Begin "7 times 3 are 21."

7 5 8 4 2 6 9 3 1 0

2. Write the products.

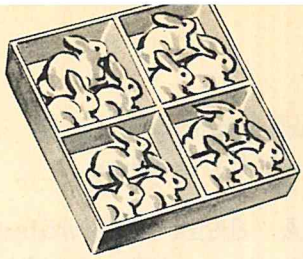
3	3	3	3	3	3	3	3	3	3
$\times 2$	$\times 0$	$\times 5$	$\times 3$	$\times 6$	$\times 4$	$\times 7$	$\times 1$	$\times 9$	$\times 8$

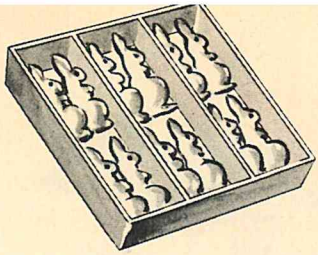


3. Mother makes "clover-leaf" rolls. Why do you think she calls them that?

4. There are 3 little parts for each roll. How many little parts are there for 3 rolls? For 4 rolls? For 5 rolls? For 8 rolls?

5. Mother makes butter cookies. She puts 3 nuts on each cookie. How many nuts does she need for 3 cookies? For 9 cookies? For 8 cookies?





$4 \times 3 = 12$ $3 \times 4 = 12$

Learning to Multiply by 3

Notice that each big box of candy rabbits has little boxes inside it.

1. How many little boxes are in the first big box? How many rabbits are in each little box? How many rabbits are there in all in the first big box? $4 \times 3 = 12$.

2. How many little boxes are in the second big box? How many rabbits are in each of these little boxes? How many rabbits are there in all in the second big box? $3 \times 4 = 12$.

Study these multiplication facts until you know them and can say each one quickly.

$3 \times 1 = 3$	$3 \times 4 = 12$	$3 \times 7 = 21$
$3 \times 2 = 6$	$3 \times 5 = 15$	$3 \times 8 = 24$
$3 \times 3 = 9$	$3 \times 6 = 18$	$3 \times 9 = 27$

3. How are the multiplication facts above like those at the top of page 208? How are they unlike?

4. There are 7 days in a week. How many days are in 3 weeks?

5. There are 4 pecks in a bushel. How many pecks are in 3 bushels?

6. There are 5 pennies in a nickel. How many pennies are in 3 nickels?

Multiplying with 0 and 1 is Easy

1. A drink of water costs 0 cents. What is the cost of 2 drinks of water? Of 5 drinks of water? Of 8 drinks of water?

Any number times 0 is **0.**

2. Find the cost of 0 cups of milk at 5 cents a cup. What is the cost of 0 cups of milk at 3 cents a cup? What is the cost of 0 cups of milk at 8 cents a cup?

0 times any number is **0.**

3. A candy stick costs 1 cent. What is the cost of 3 candy sticks? Of 7 candy sticks?

Any number times 1 is the number.

4. What is the cost of 1 cup of milk at 5 cents a cup? What is the cost of 1 cup of milk at 3 cents a cup? At 7 cents a cup?

1 times any number is the number.

5. Say these products quickly:

0×1	2×0	0×3	1×0	0×2
1×2	3×1	2×1	1×1	1×3

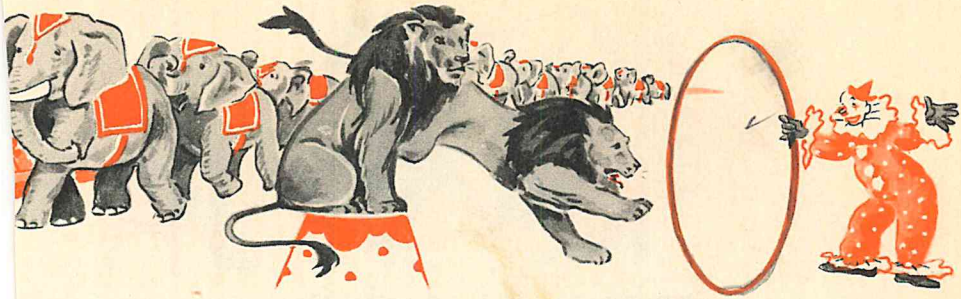
Write these products. Check by addition.

6.

22	31	13	23	32	33	621	432
$\times3$	$\times2$	$\times3$	$\times2$	$\times3$	$\times3$	$\times3$	$\times3$

7.

42	51	63	70	82	71	702	820
$\times3$	$\times3$	$\times2$	$\times3$	$\times3$	$\times2$	$\times3$	$\times3$



Jack and Judy See the Circus

1. Judy saw a little man 2 feet tall. Jack said Father is 3 times as tall as the little man. How tall is Father?

2. Jack saw a bear that was 3 feet tall. The keeper said the elephant was 3 times as tall. How tall is the elephant?

3. There was once an elephant named Jumbo that was more than 11 feet tall. How much taller was Jumbo than the elephant Jack saw?

4. The children saw a little man 4 feet tall. Then they saw a clown on stilts. The clown on stilts was 3 times as tall as the little man. How tall was the clown?

5. The keeper said the elephant ate 80 pounds of dry hay every day. How many pounds would he eat in 3 days?

6. There were 2 lions in each cage. How many lions were there in 3 cages?

7. There were 6 horses pulling each circus wagon. How many were pulling 3 circus wagons?

8. There were 3 funny clowns. Each had 9 balloons. How many balloons did they have in all?

Multiplying by 3 with Carrying

Miss Martin's children are practicing for a play they will give next week to other rooms. They will send each child in the other rooms a ticket.

1. If 3 of Miss Martin's children make 65 tickets each, how many tickets will that be?

Multiply 65 by 3.

Think 3 times 5 are 15. Write **5** under 5 and carry 1.

Think 3 times 6 are 18 and 1 (carried) make 19. Write **19**.

The product is **195**.

Multiply	*Check*
65	65
x3	65
195	65
	195

Check by adding 65 three times in a column. The sum is 195.

2. If 3 children had made 139 tickets each, how many tickets would that be?

Multiply 139 by 3.

Think 3 times 9 are 27. Write 7 under 9 and carry 2.

Think 3 times 3 are 9, and 2 (carried) make 11. Write **1** under 3 and carry 1.

Think 3 times 1 is 3 and 1 (carried) make 4. Write **4**.

The product is **417**. Check by adding.

Multiply	*Check*
139	139
x3	139
417	139
	417

Some Times-And Facts with 3's

Say the answers below quickly. Read the first one "5 times 3 are 15 and 1 make 16," or read it "5 times 3 and 1 are 16."

1. $5\times3+1=$ $4\times3+1=$ $9\times3+1=$ $2\times3+1=$
2. $5\times3+2=$ $4\times3+2=$ $9\times3+2=$ $6\times3+2=$
3. $7\times3+2=$ $6\times3+1=$ $8\times3+2=$ $7\times3+1=$
4. $3\times3+1=$ $3\times4+1=$ $3\times6+2=$ $3\times7+2=$
5. $3\times8+2=$ $3\times5+2=$ $3\times6+1=$ $3\times3+1=$

Write the products.

6.

34	46	68	77	89	58	64	35
×3	×3	×3	×3	×3	×3	×3	×3

7.

32	33	32	36	23	36	33	37
×5	×4	×9	×2	×5	×3	×9	×2

8. There are 24 hours in a day. How many hours are in 3 days?

9. There are 36 inches in a yard. How many inches are in 3 yards?

10. There are 3 feet in one yard. How many feet are in 18 yards?

11. If 3 handkerchiefs are packed in a box, how many handkerchiefs are packed in 16 boxes?

12. If 144 pencils are packed in one box, how many pencils are packed in 3 boxes?

13. If a barrel of oil contains 55 gallons, how many gallons will 3 barrels of oil contain?

Multiplying Dollars and Cents

1. A shirt for Jack costs $1.23. What will be the cost of 3 shirts?

Multiply $1.23 by 3. Write the dollar sign in front of the product, and write the cents point of the product exactly under the cents point of $1.23.

Multiply	Check
$1.23	$1.23
x3	1.23
	1.23
$3.69	$3.69

You can check by writing $1.23 three times in a column and adding.

2. What is the cost of 3 pairs of shoes at $2.29 a pair?

$2.29
x3
$6.87

3. What is the cost of 3 neckties at 59 cents each?

To multiply, write 59 cents as $0.59.

$0.59
x3
$1.77

4. What is the cost of 3 hats at $1.42 each?

5. Find the cost of 3 raincoats at $2.48 each.

6. What is the cost of 3 pairs of socks at 29 cents a pair?

7. Find the cost of 3 belts at 69 cents each.

8. What is the cost of 4 pairs of gloves at $2.32 a pair?

9. Find the cost of 6 coats at $3.23 each.

10. What is the cost of 3 caps at $0.98 each?

11. Multiply.

$0.42	$1.28	$4.27	$2.67	$3.95
×3	×3	×3	×3	×3

Multiplication Practice

Multiply. Check by adding.

	a	b	c	d	e	f	g
1.	26 ×3	15 ×3	34 ×3	48 ×3	203 ×3	128 ×3	229 ×3
2.	57 ×3	39 ×3	28 ×3	84 ×3	216 ×3	327 ×3	302 ×3
3.	50 ×3	31 ×3	12 ×3	52 ×3	172 ×3	261 ×3	280 ×3
4.	16 ×3	93 ×3	85 ×3	37 ×3	193 ×3	160 ×3	282 ×3
5.	76 ×3	94 ×3	29 ×3	71 ×3	276 ×3	194 ×3	165 ×3
6.	18 ×3	37 ×3	56 ×3	91 ×3	248 ×3	239 ×3	134 ×3

Multiply.

	a	b	c	d	e
7.	$8.23 ×3	$6.24 ×3	$5.82 ×3	$7.35 ×3	$1.43 ×3
8.	$0.43 ×3	$0.75 ×3	$0.98 ×3	$0.66 ×3	$0.72 ×3

stop

Number Problems at the Zoo

1. The zoo keeper let Billy ride the elephant. The elephant was 8 feet tall. Billy is only half as tall. How tall is Billy?

2. The elephant ate 75 lb. of hay a day. How many pounds did the elephant eat in 3 days?

3. The elephant Jumbo weighed twelve thousand pounds. The zoo elephant weighed ten thousand five hundred pounds. Write these numbers in figures.

4. If Jumbo weighed 12,000 pounds and the other elephant weighed 10,500 pounds, how much more did Jumbo weigh?

5. Tom saw a man carrying water to an elephant. The man said a big elephant drinks 60 gallons of water a day. Name something that holds about 1 gallon. Name something that holds about 60 gallons.

6. If one elephant drinks 60 gallons of water a day, how many gallons will 3 elephants drink?

7. One big elephant was 63 years old, and another elephant was 29 years old. How much older was the big elephant?

8. Ellen counted 9 grizzly bears, 5 cinnamon bears, 12 brown bears, and 3 polar bears. How many bears did she count in all?

9. Mary asked the keeper to let her feed the monkeys. She gave 3 pieces of carrot to each monkey. How many pieces of carrot did she give to 9 monkeys?

10. Ellen had 65 pieces of carrot. How many did she have left after she had given 27 of them to the monkeys?

11. The keeper fed 8 seals. He gave 3 fish to each seal. How many did he give to all of them?

12. Billy saw a fine herd of 24 buffaloes. Half of them were looking through the fence at him. How many buffaloes were looking at Billy?

13. Betty saw two polar bears. One of them weighed 985 pounds, and the other weighed 739 pounds. How much more did the first bear weigh?

A sign said that the grizzly bear was nine feet six inches long. Draw a line on the blackboard to show how long the bear was.

Can you find 1 inch on your ruler? It is this long _____. A short way to write one inch is **1 in.**

This Page Will Help You to Divide by 3

1. Popcorn balls cost 3 cents each. How many popcorn balls can Jane buy for 6 cents?

Think, "? $\times 3¢ = 6¢$, or $6¢ \div 3¢ =$?"

2. Candied apples cost 3 cents each. How many candied apples can Jane buy for 18 cents?

Think, "? $\times 3¢ = 18¢$, or $18¢ \div 3¢ =$?"

Study these division facts until you can say each one quickly.

$3 \div 3 = 1$	$12 \div 3 = 4$	$21 \div 3 = 7$
$6 \div 3 = 2$	$15 \div 3 = 5$	$24 \div 3 = 8$
$9 \div 3 = 3$	$18 \div 3 = 6$	$27 \div 3 = 9$

3. Divide each of these numbers by 3. Read the first one "21 divided by 3 is 7." Say each quotient quickly.

21 15 3 27 24 6 18 12 9 0

4. Say these quotients quickly.

$3\overline{)18}$	$3\overline{)12}$	$3\overline{)21}$	$3\overline{)9}$	$3\overline{)27}$
$3\overline{)3}$	$3\overline{)24}$	$3\overline{)6}$	$3\overline{)33}$	$3\overline{)66}$

5. How many 3-cent stamps can I buy for 12 cents? For 18 cents? For 21 cents? For 27 cents?

6. An orange costs $3¢$. How many oranges can I buy for $9¢$? For $15¢$? For $24¢$?

7. There are 3 feet in 1 yard. The schoolroom is 24 feet wide. How many yards is this?

This Page Will Help You to Find How Many 3's in a Number

Ruth has 15 colored post cards. She wants to divide them among 5 children so that each child has the same number of post cards. How many cards will each child get?

There are five 3's in 15, and there are three 5's in 15.

Study these division facts until you can say each of them quickly.

$3 \div 1 = 3$	$12 \div 4 = 3$	$21 \div 7 = 3$
$6 \div 2 = 3$	$15 \div 5 = 3$	$24 \div 8 = 3$
$9 \div 3 = 3$	$18 \div 6 = 3$	$27 \div 9 = 3$

How are the division facts above like those on page 218? How are they unlike those on page 218?

1. Say or write the quotients.

$6\overline{)18}$	$7\overline{)21}$	$4\overline{)12}$	$2\overline{)6}$	$8\overline{)24}$
$9\overline{)27}$	$5\overline{)15}$	$3\overline{)9}$	$2\overline{)8}$	$6\overline{)12}$

2. Harry divided 24 marbles among 3 friends so that each friend got the same number of marbles. How many marbles did each get?

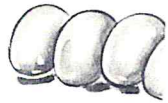
3. Joe divided 12 stamps among 4 boys so that each boy got the same number of stamps. How many stamps did each boy get? Draw a picture to show how Joe divided the stamps.

Dividing Things into Thirds

Blanche divided a candy bar into 3 equal parts. Each part is one third of the candy bar. One third is written in figures as $\frac{1}{3}$.

Which is larger, one third of an apple or one half of an apple?

Harold divided 12 eggs into 3 equal parts. There were 4 eggs in each part. Each part is called one third.



$\frac{1}{3} \times 12 = 4$

To find $\frac{1}{3}$ of a number, you divide the number by 3.

1. Find $\frac{1}{3}$ of each of these numbers.

6 21 27 15 9 18 3 24 12 0

2. Helen had 21 paper dolls and gave $\frac{1}{3}$ of them away. How many did she give away?

3. There are 18 pigs in a pen. If $\frac{1}{3}$ of them are black, how many black pigs are in the pen?

4. John is 27 years old. Harvey is $\frac{1}{3}$ as old as John. How old is Harvey?

5. Mary had 6 pieces of candy. If she gave $\frac{1}{3}$ of it to Jane, how much did she give away?

6. Jim has read $\frac{1}{3}$ of his book. The book has 27 pages. How many pages has Jim read?

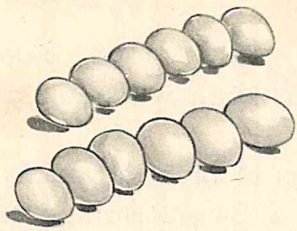
Read and say the answers. The first one is "$\frac{1}{3}$ of 24 is 8."

7. $\frac{1}{3} \times 24$ $\frac{1}{3} \times 30$ $\frac{1}{3} \times 36$ $\frac{1}{3} \times 60$

8. $\frac{1}{3} \times 90$ $\frac{1}{3} \times 63$ $\frac{1}{3} \times 69$ $\frac{1}{3} \times 96$

Dozens and Parts of a Dozen

There are 12 things in a dozen. Eggs and oranges from the grocery and cakes and rolls from the bakery are bought by the dozen.



1. Name as many things as you can that are bought by the dozen.

2. How many eggs are in a row when a dozen eggs are in 2 equal rows?

3. Mother used one-half dozen eggs in a cake. How many eggs was this?

4. How many cakes are in a row when a dozen cakes are placed in 3 equal rows? Draw a picture.

5. I ate one third of a dozen doughnuts. How many doughnuts did I eat?

6. Eggs cost 42¢ a dozen. How much will 3 dozen eggs cost?

7. Mrs. Taylor bought a dozen oranges and used 5 of them. How many did she have left?

8. It takes a dozen eggs to make an angel food cake. Mrs. Black has 7 eggs. How many more does she need?

9. Six eggs are what part of a dozen eggs?

10. Four eggs are what part of a dozen eggs?

11. Draw a picture of $\frac{1}{2}$ dozen doughnuts.

12. Draw a picture of $\frac{1}{3}$ dozen doughnuts.

13. Glen bought 2 dozen peaches. How many peaches was this?

Divisions with Remainders

1. Henry has 25 cents. How many 3-cent stamps can he buy, and how much will be left over?

By dividing, you find he can buy eight 3-cent stamps, and he will have 1 cent left over.

$$3\overline{)25} \quad 8 \text{ r } 1$$

2. Miriam has 20 cents. How many 3-cent stamps can she buy, and how much will she have left over?

Tell the number that belongs in place of each $*$.

3. For 10 cents I can buy $*$ 3-cent stamps and will have $*$ cents left over.

4. For 17 cents I can buy $*$ 3-cent stamps and will have $*$ cents left over.

5. For 25 cents I can buy $*$ 3-cent apples and will have $*$ cents left over.

6. For 28 cents I can buy $*$ 3-cent oranges and will have $*$ cents left over.

Say how many 3's and how many over for these numbers. Say the first one, "5 and 0 over," and say the second one, "8 and 2 over."

7.	15	26	14	5	22	8	28	3	19
8.	20	10	16	13	27	4	18	11	24
9.	25	6	21	9	17	12	23	7	29

10. You can make a triangle with 3 matches. If you have 17 matches, how many triangles can you make and how many matches will be left over?

11. If you have 22 matches, how many triangles can you make and how many matches will be left?

This Practice Will Help You to Divide

1. Divide 96 by 3. Check by multiplication.

Think 9 divided by 3 is 3. Write the quotient figure **3** above 9.

Think 6 divided by 3 is 2. Write the quotient figure **2** above 6.

Divide

$$3\overline{)96}$$ 32

Check

32
x3
96

The quotient is **32**. To check, multiply 32 by 3. The product is **96**, which is the number we divided.

2. Divide 248 by 8. Check by multiplication.

Think 24 divided by 8 is 3. Write the quotient figure **3** above 4 of 24.

Think 8 divided by 8 is 1. Write the **1** above 8.

Divide

$$8\overline{)248}$$ 31

Check

31
x8
248

The quotient is **31**. To check, multiply 31 by 8. The product is **248**, which is the number we divided.

Divide and check.

3.	$3\overline{)69}$	$3\overline{)93}$	$3\overline{)39}$	$3\overline{)63}$	$3\overline{)36}$
4.	$3\overline{)213}$	$3\overline{)156}$	$3\overline{)249}$	$3\overline{)183}$	$3\overline{)276}$
5.	$4\overline{)128}$	$6\overline{)186}$	$8\overline{)240}$	$7\overline{)217}$	$8\overline{)168}$
6.	$5\overline{)155}$	$4\overline{)124}$	$9\overline{)189}$	$6\overline{)120}$	$8\overline{)160}$

We Are Looking for a Winning Team

Page 18 will tell you how to choose teams and how to race. Check papers after each race.

Race 1. Ready! Go!

Write in figures.

1. Nine thousand twelve
2. Twelve thousand five
3. Four thousand six hundred nine
4. One thousand two hundred eleven
5. Fifty thousand one hundred

Race 2. Write the sums.

1.	14+8	17+9	15+7
2.	28+4	25+8	29+2
3.	35+7	38+2	37+6
4.	16+5	27+8	36+9
5.	13+9	24+5	37+4

Race 3. Add.

1.

	7		13	468
3	1	78	97	372
8	4	96	38	247
4	9	45	49	816

2.

3	7	96	28	362
5	2	9	17	37
8	4	18	7	4
6	9	7	32	143
4	6	1	9	32

Race 4. Subtract.

1.	784	835	455	852	374
	231	441	227	383	281
2.	315	743	825	364	589
	212	655	87	126	257
3.	784	242	325	346	284
	32	24	216	21	177
4.	539	780	470	916	732
	65	472	62	347	172

Race 5. Write the products.

1.	2×8	3×7	4×2	1×6
2.	9×3	6×0	2×7	3×5
3.	5×3	2×9	0×4	6×2
4.	7×1	8×2	0×0	3×3
5.	8×3	2×6	3×9	4×1

Race 6. Find the answers.

1. Jack had 67 marbles and bought 36 more. How many did he have then?

2. Ted had 98 marbles and lost 29 of them. How many did he have then?

3. Sue bought 3 picture books at 24 cents each. How much did they cost?

4. How many 3-cent stamps can John buy with 15 cents?

Learning About Pints, Quarts, and Gallons

The teacher has a pint milk bottle, a quart milk bottle, and a gallon milk jug on her desk. Which ones of these have you bought milk in, or seen milk sold to others in? We can use these bottles and the jug to learn about measuring.

1. Fill the pint milk bottle with water and pour the water into the quart milk bottle. Fill the pint bottle again with water and pour into the quart bottle. Do two pints exactly fill the quart bottle?

2. Fill the quart bottle with water and pour into the gallon jug. Count how many times you must pour a quart of water into the jug to fill it.

Remember These Liquid Measures

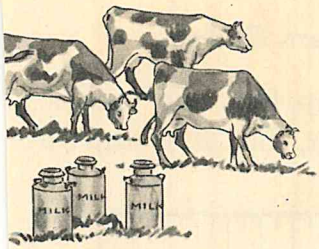
2 pints (pt.) equal 1 quart (qt.)

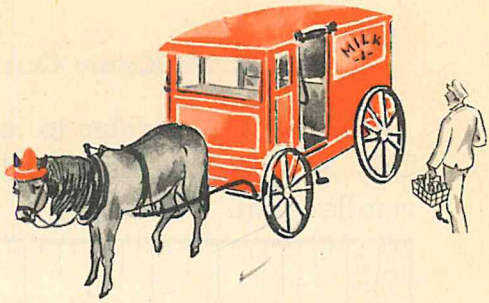
4 quarts (qt.) equal 1 gallon (gal.)

A pint is one half of a quart; a quart is one fourth of a gallon.

3. Draw a picture to show how a pint of chocolate milk would look if poured into a quart milk bottle.

4. Draw a picture to show how a quart of cherry juice would look if poured into the gallon jug.





The Dairy Farmer

Edward visited Mr. Minter. Mr. Minter owns several cows. He milks them and sells the milk in a little town near by. He let Edward help him. In helping, Edward had to use pints, quarts, and gallons that he had learned about in school.

1. Mr. Minter cools his milk in pans that hold 2 gallons each. How many quart bottles can he fill from a pan full of milk?

2. Mrs. Minter gave Edward a gallon jug and asked him to bring about 2 quarts of milk to the house. How full should he fill the jug to have about 2 quarts in it?

3. One day Mr. Minter delivered 592 quarts of milk. How many pints would this make?

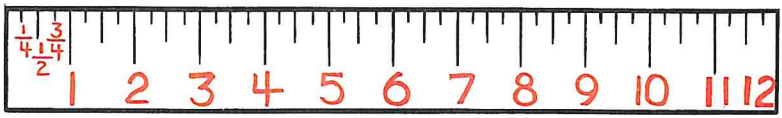
4. The next day Mr. Minter sold 200 gallons of milk. How many quarts would this make?

5. Mr. Minter had 846 bottles to wash. Edward washed half of them. How many did Edward wash?

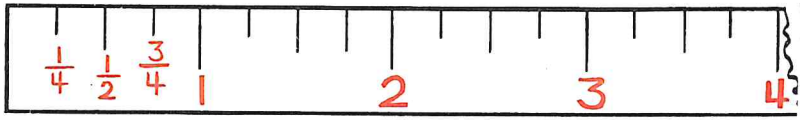
6. One day Edward poured milk from pint bottles into a gallon jug. How many pint bottles would he need to pour into the jug to fill it?

Let Us Know Our Rulers Better

We use a foot ruler to measure feet and inches. This is a picture of a foot ruler, but it is drawn smaller than a real one.



This is a picture of a part of a foot ruler. It is made the exact size of a real ruler.



We use a yard stick to measure things that are several feet long. Draw a picture of a yard stick on the blackboard.

1. Put your finger on the mark of the foot ruler which shows $\frac{1}{2}$ inch.

2. Put your finger on the mark which shows $\frac{1}{4}$ inch.

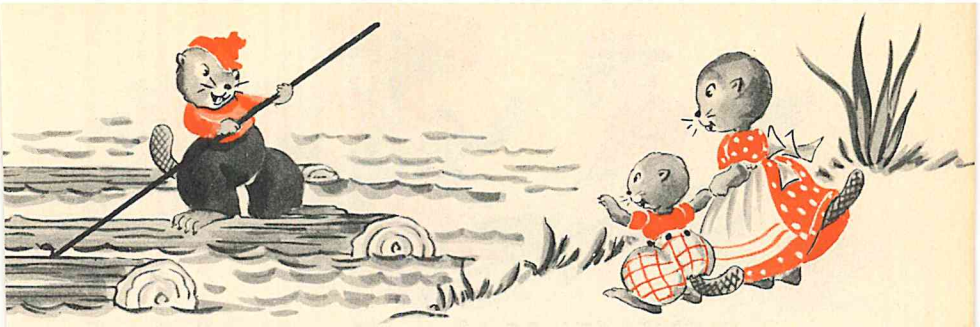
3. Draw lines to show these lengths.

8 inches 4 inches 5 inches 11 inches
$1\frac{1}{2}$ inches $7\frac{1}{2}$ inches $3\frac{1}{2}$ inches $9\frac{1}{4}$ inches

4. Lay 3 foot rulers along the yard stick. Are the 3 foot rulers taken together equal exactly to the yardstick?

Remember These Measures of Length

12 inches (in.) equal 1 foot (ft.)
3 feet (ft.) or 36 inches equal 1 yard (yd.)



Another Busy Beaver Page

Being a beaver keeps you busy. This page will show you how well you can multiply and divide by 3.

Multiply and check.

1.	21	32	44	21	482	524
	×3	×3	×2	×2	×3	×3
2.	74	85	96	55	416	253
	×3	×3	×3	×3	×2	×3

Divide and check.

3.	$3\overline{)96}$	$3\overline{)69}$	$3\overline{)93}$	$3\overline{)156}$	$3\overline{)189}$
4.	$3\overline{)183}$	$3\overline{)216}$	$3\overline{)246}$	$3\overline{)279}$	$3\overline{)129}$

Divide these numbers by 3. Write the quotients and remainders.

5.	5	10	26	16	28	19
6.	7	17	11	23	29	20

If you made five mistakes or fewer you will find some helpful work on page 231.

Other beavers will do the work on page 230.

stop

Helps for Making a Stronger Wall

Study these multiplication and division facts. Then cover the answers and say them. Practice until you can say each one quickly.

1.	$3\times8=24$	$6\times3=18$	$7\times3=21$	$3\times7=21$
2.	$3\div3=1$	$3\times1=3$	$9\times3=27$	$2\times3=6$
3.	$1\times3=3$	$6\div3=2$	$3\times2=6$	$12\div3=4$
4.	$15\div3=5$	$3\times9=27$	$5\times3=15$	$3\times3=9$
5.	$3\times4=12$	$27\div3=9$	$3\times0=0$	$18\div3=6$
6.	$24\div3=8$	$3\times5=15$	$9\div3=3$	$0\times3=0$
7.	$4\times3=12$	$21\div3=7$	$3\times6=18$	$8\times3=24$

Multiply and check.

8.	42	51	73	60	423	601	581
	$\times3$	$\times3$	$\times3$	$\times3$	$\times3$	$\times3$	$\times3$
9.	28	36	75	96	728	892	382
	$\times3$	$\times3$	$\times3$	$\times3$	$\times3$	$\times3$	$\times3$

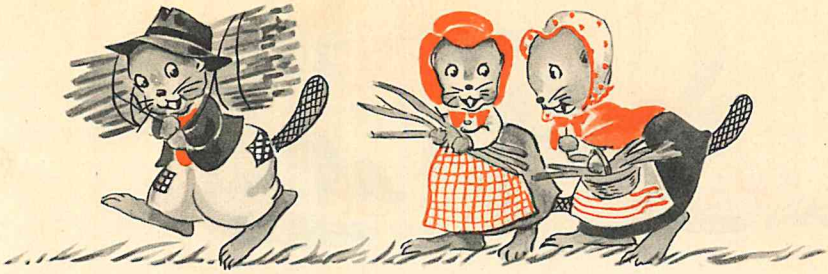
Divide each of these numbers by 3:

10.	18	15	21	12	189	153	216
11.	24	27	36	93	120	246	273

Tell the word which belongs in place of each $*$.

12. To find one third of a number, $*$ it by 3.

13. When you multiply, the answer is the $*$.



A Beaver Builder Page

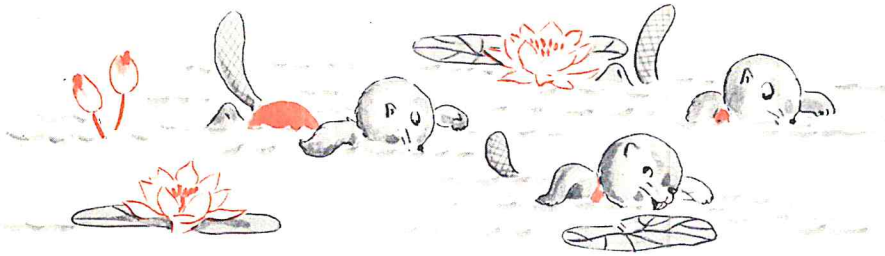
As soon as you have worked this page and are sure all your answers are right, take five other beavers to the blackboard. Have each beaver work a different row. Do some of the beavers get answers quickly that gave you trouble?

Write the products.

1.	2 ×3	3 ×3	20 ×3	32 ×3	13 ×3	213 ×3	302 ×3	120 ×3
2.	4 ×3	5 ×3	42 ×3	50 ×3	71 ×3	226 ×3	371 ×3	149 ×3
3.	0 ×3	3 ×1	82 ×3	91 ×3	14 ×3	421 ×3	730 ×3	906 ×3

Write the quotients.

4.	$3\overline{)12}$	$3\overline{)63}$	$3\overline{)150}$	$3\overline{)123}$	$3\overline{)159}$	$3\overline{)153}$
5.	$3\overline{)21}$	$3\overline{)39}$	$3\overline{)186}$	$3\overline{)210}$	$3\overline{)126}$	$3\overline{)216}$
6.	$3\overline{)27}$	$3\overline{)90}$	$3\overline{)213}$	$3\overline{)243}$	$3\overline{)249}$	$3\overline{)183}$



Swimming Along

1. Earl is a Boy Scout. If he can walk 3 miles in an hour, how far can he walk in 6 hours?

2. Betty is a Brownie. She can dress 1 doll in 2 hours. How long will it take her to dress 9 dolls?

3. A school got 156 books. If the books are divided among 3 rooms so that each room gets the same number, how many books will each room get?

4. Uncle Henry bought 10 cents' worth of apples at 2 cents each. How many apples did he buy?

5. Mary bought 14 post cards at 3 cents each. What did she pay for them?

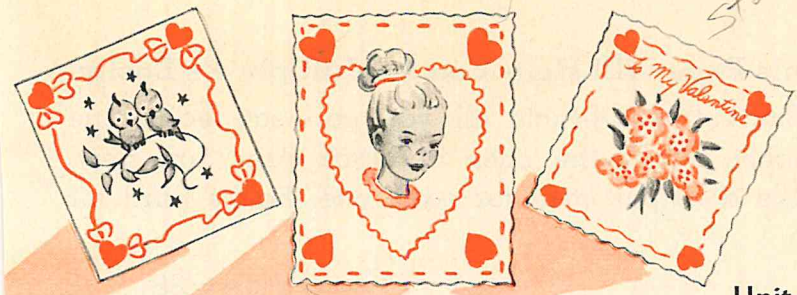
6. It is 640 miles from Jane's home to her grandmother's home. Jane's father drove one-half the distance in 1 day. How many miles did he drive?

7. Billy's new book has 123 pages in it. He read $\frac{1}{3}$ of the book the first day he had it. How many pages did he read that day?

8. John has a rope 24 feet long. How many yards long is the rope?

9. Find the cost of 3 pounds of meat at 27¢ a pound.

10. Mrs. Hale paid 84¢ for 2 dozen eggs. How much did the eggs cost a dozen?



Learning to Multiply with 4

1. Helen is making valentines. She wishes to put a heart in each of the 4 corners. How many hearts will she need for 3 valentines? Draw a picture of 3 valentines and find out how many hearts she will need.

The table below will help you to find the answers.

Multiplying is a short way of adding.

4	4	4	4	4
4	4	4	4	4
	4	4	4	4
		4	4	4
			4	4
				4

Two 4's are . . . 8
Three 4's are . . . 12
Four 4's are 16
Five 4's are 20
Six 4's are 24

2. How many hearts will Helen need to make 6 valentines? To make 3? To make 5? To make 4?

3. Find the cost of 5 valentines bought at the store at 4 cents each.

4. If 6 children each made 4 valentines, how many valentines would that be?

This Page Will Help You to Multiply 4's Easily

Study these 4-facts till you can say each one quickly. Only the ones in black print are new. Make a helper card for each one that is hard for you.

$1 \times 4 = 4$	$4 \times 4 = 16$	$7 \times 4 = 28$
$2 \times 4 = 8$	$5 \times 4 = 20$	$8 \times 4 = 32$
$3 \times 4 = 12$	$6 \times 4 = 24$	$9 \times 4 = 36$

Write these products. Check by going over your work a second time with the answers covered.

1.	32	32	57	43	321	241	414
	$\times 4$	$\times 5$	$\times 3$	$\times 4$	$\times 4$	$\times 5$	$\times 6$
2.	24	43	34	23	573	342	144
	$\times 5$	$\times 5$	$\times 6$	$\times 4$	$\times 3$	$\times 4$	$\times 5$

Some multiplication problems tell you how many are in 1 group and ask you to find how many are in more than 1 group.

3. If 4 children sit at each table, how many children will sit at 4 tables? At 6 tables? At 8 tables?

4. There are 11 players on a football team. How many players are there on 2 football teams? On 6 football teams?

5. If there are 32 marbles in each bag, how many marbles are in 4 bags? In 8 bags? In 9 bags?

6. There are 12 crayons in a box. How many crayons are in 5 boxes? In 7 boxes? In 9 boxes?

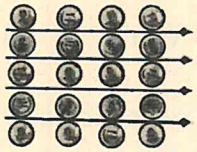
start

More Multiplication Facts and Problems

Alice placed 20 pennies in 5 equal rows. There were 4 pennies in a row. $5 \times 4 = 20$.

Tom placed 20 pennies in 4 equal rows. There were 5 pennies in a row. $4 \times 5 = 20$.

Alice's Pennies



Tom's Pennies

Write or say each product below.

	a	b
1.	5×4, and 4×5	3×4, and 4×3
2.	7×4, and 4×7	6×4, and 4×6
3.	9×4, and 4×9	8×4, and 4×8

Study these multiplication facts until you can say each of them quickly.

$4 \times 1 = 4$	$4 \times 4 = 16$	$4 \times 7 = 28$
$4 \times 2 = 8$	$4 \times 5 = 20$	$4 \times 8 = 32$
$4 \times 3 = 12$	$4 \times 6 = 24$	$4 \times 9 = 36$

Some multiplication problems tell you how much 1 thing costs and ask you to find the cost of more than 1 thing.

4. A pencil costs 4 cents. What is the cost of 6 pencils?

5. What is the cost of 4 boxes of crayons at 15 cents a box?

6. A quart of milk costs 16¢. What is the cost of 4 quarts of milk?

Multiplying by 4 with Carrying

1. Multiply 369 by 4.

Think 4 times 9 equals 36. Write 6 under 9, and carry 3.

Think 4 times 6 and 3 make 27. Write 7 under 6 and carry 2.

Think 4 times 3 and 2 make 14. Write **14** as shown. The product is **1,476.**

Multiply
369
×4
1,476

Study these Times-And facts. Be able to say each with the answer covered.

	a	b	c
2.	$4\times7+1=29$	$4\times5+3=23$	$4\times4+2=18$
3.	$4\times3+2=14$	$4\times8+1=33$	$4\times2+3=11$
4.	$4\times1+3=7$	$4\times0+2=2$	$4\times6+1=25$

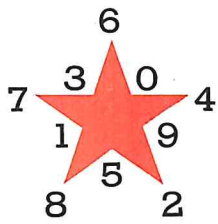
Say these Times-And facts:

5.	$5\times4+1$	$6\times3+1$	$3\times6+1$	$4\times7+2$
6.	$5\times2+2$	$5\times3+1$	$5\times4+2$	$6\times2+1$

7. Multiply the numbers around the star by 4 and add 1.

8. Multiply the numbers around the star by 4 and add 2.

9. Multiply the numbers around the star by 4 and add 3.



10. Multiply:

a	b	c	d	e	f
427	816	683	750	482	627
×4	×4	×4	×4	×4	×4

Ellen Learns to Divide by 4

Ellen asked 16 children to a party. Four children will sit at a table. How many tables will she need? If you study this page, you can tell her quickly.

Read these multiplication and division facts, and say the number that belongs in place of each $*$.

1. $*\times 4=12,\ 12\div 4=*$ $\quad *\times 4=20,\ 20\div 4=*$

2. $*\times 4=16,\ 16\div 4=*$ $\quad *\times 4=24,\ 24\div 4=*$

3. $*\times 4=32,\ 32\div 4=*$ $\quad *\times 4=0,\ 0\div 4=*$

Which of these facts would Ellen use to know how many tables she would need?

Study these division facts. Make helper cards for any that are hard for you.

$4\div 4=1$	$16\div 4=4$	$28\div 4=7$
$8\div 4=2$	$20\div 4=5$	$32\div 4=8$
$12\div 4=3$	$24\div 4=6$	$36\div 4=9$

4. Ellen had the children play a game with picture cards. If she divided 24 cards equally among 4 children, how many did each get?

Write the quotients:

5. $4\overline{)48}$ $\quad 4\overline{)84}$ $\quad 4\overline{)124}$ $\quad 4\overline{)168}$ $\quad 4\overline{)204}$ $\quad 4\overline{)328}$

6. $4\overline{)40}$ $\quad 4\overline{)88}$ $\quad 4\overline{)248}$ $\quad 4\overline{)320}$ $\quad 4\overline{)284}$ $\quad 4\overline{)160}$

Feeding a Baby Calf

1. The farmer feeds a baby calf from a bottle until it is 3 days old. The farmer mixes 1 quart of milk with 1 pint of water. How many pints is this?

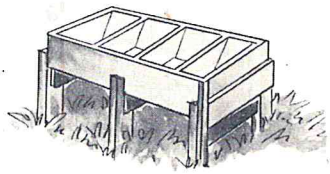
2. The farmer mixes calf feed with water and milk. If one little calf drinks 6 pints of this food in 1 day, how many pints will he drink in 4 days?

3. A farmer mixed 24 pints of food. If one little calf drinks 3 pints for his breakfast, how many little calves is the farmer going to feed?

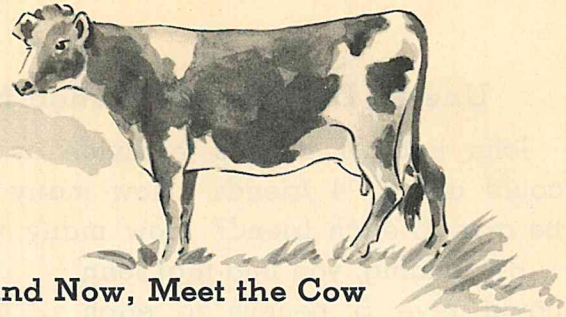
4. A three-week-old calf needs 3 cups of dry meal each day and 5 quarts of warm water mixed with the meal. How many cups of dry meal will the calf need in 7 days? How many quarts of warm water will it drink in 7 days?

5. Here is the box or trough where the bigger calves eat. How many calves can eat at the trough shown in the picture?

6. How many calves can eat at 8 troughs like the one shown in the picture?



7. If the trough shown in the picture is 8 ft. long, how long is the space for each calf?



And Now, Meet the Cow

1. This cow weighed 173 lb. when she was four months old. She is three years old now and weighs 950 pounds. How much has she gained?

2. A fine Jersey cow weighed 725 lb. A big Brown Swiss cow weighed 1124 lb. How much more did the Swiss cow weigh?

3. If it cost $85 to raise one cow, how much will it cost to raise 4 cows?

4. One big cow ate $97 worth of feed in one year. How much will it cost to feed her 2 years?

5. A farmer sold milk and made $144 in one year. How much could he make in 6 years?

6. Dry feed is often measured by the gallon. Look at the picture and tell how many pounds 4 gallons of dry feed will equal.

7. If one cow eats 3 gallons of feed in one day, how many gallons will she eat in one week?

8. Look at these milk cans. What is the quick way to find how many gallons in the 4 cans?

9. How many quart bottles can the farmer fill from 1 can?

Uneven Division and Station Numbers

John had 21 pencils to divide as evenly as he could among 4 friends. How many pencils could he give to each friend? How many would be left?

By dividing, you find that John could give 5 pencils to each friend, and would have 1 pencil left over.

$$4\overline{)21}\quad 5 \text{ r } 1$$

20 Station Number

When there is a remainder, or a number left over, the division is uneven.

The number 21 cannot be divided evenly by 4. To divide 21 by 4, first think back to the nearest number smaller than 21 that can be divided evenly by 4. The number is 20. We call such a number a **station number.**

The number 27 cannot be evenly divided by 4. What is the station number?

Divide each number below by 4. Think back to the station number and then say the quotient and remainder. The station number for each column is in the ring at the top of the column.

(4)	(8)	(12)	(16)	(20)	(24)	(28)	(32)	(36)
5	9	13	17	21	25	29	33	37
6	10	14	18	22	26	30	34	38
7	11	15	19	23	27	31	35	39

Divide by 4. Think back to the station number, and then say the quotient and the remainder.

1.	18	29	35	11	22	38	27	13	23
2.	15	33	28	17	19	25	39	34	31

Remembering Playmates

Four third-grade boys and four third-grade girls have been out of school because of illness. They are now well enough to play at home. The other children plan to send a box to each child who is out.

1. The boys have brought 27 marbles, 35 picture cards, 17 toy soldiers, and 29 toy airplanes. They want to divide these as evenly as they can and send them to the 4 boys who are sick.

How many marbles can they give to each boy who is sick, and how many marbles will be left over?

How many picture cards can they give to each boy who is sick, and how many will be left over?

How many toy soldiers and how many airplanes can they give to each boy who is sick, and how many of each will be left over?

2. The girls brought 30 jacks, 33 paper dolls, 31 picture books, and 18 paper flowers.

How many of each of these things can they give to each girl who is sick, and how many of each will be left over?

Division with 4

Study these division facts until you know them.

$4 \div 1 = 4$	$16 \div 4 = 4$	$28 \div 7 = 4$
$8 \div 2 = 4$	$20 \div 5 = 4$	$32 \div 8 = 4$
$12 \div 3 = 4$	$24 \div 6 = 4$	$36 \div 9 = 4$

Find the quotients:

1. $3\overline{)12}$ $8\overline{)32}$ $6\overline{)24}$ $3\overline{)126}$ $4\overline{)164}$

2. $5\overline{)20}$ $9\overline{)36}$ $2\overline{)86}$ $3\overline{)183}$ $2\overline{)148}$

Some division problems tell you the total number of things to be divided into equal groups and ask you how many will be in each group after you divide.

3. Four boys are camping. They have 1 dozen eggs to be divided equally among the boys. How many eggs will each boy get?

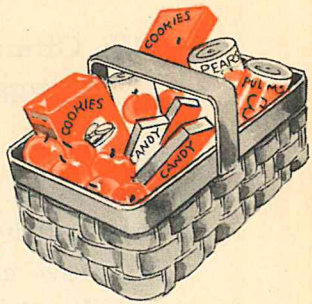
4. Mrs. Gates baked 124 cookies. She wants to divide them into 4 equal boxes. How many cookies will be in each box?

5. There are 48 children to be divided into 4 equal teams. How many children will be on each team?

6. Mr. Rose raises flowers. He has 84 pansy plants to give to 4 hospitals. If each hospital gets the same number, how many will each get?

7. Grandfather had 44 pennies. He divided them among his 4 grandchildren so that each child received the same number of pennies. How many did each receive?

Learning to Use Division to Solve Problems

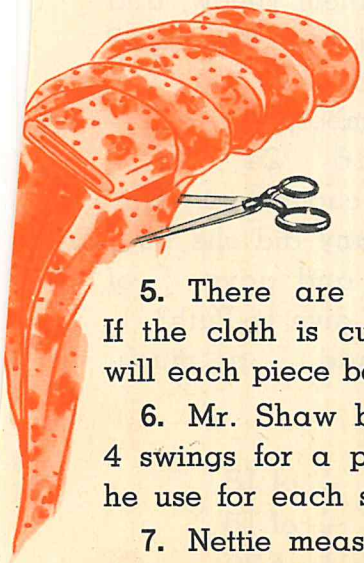


Some division problems tell you the cost of several things, when all cost alike, and ask you to find the cost of one.

1. Mother and May went shopping. May bought 4 candy bars for 24¢. Find the cost of 1 candy bar.

2. Mother paid 48¢ for 4 boxes of cookies. How much did the cookies cost a box?

3. Mother paid 80¢ for 4 cans of fruit. Find the cost of 1 can of fruit.



4. If 4 apples cost 12¢, what is the cost of 1 apple?

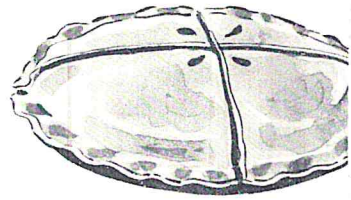
Some division problems tell you the length of a board, rope, cloth, or ribbon, and tell you to divide it into pieces of equal length.

5. There are 128 yards in a piece of cloth. If the cloth is cut into 4 equal pieces, how long will each piece be?

6. Mr. Shaw bought 24 yards of rope to make 4 swings for a playground. How much rope can he use for each swing?

7. Nettie measures a piece of ribbon and finds that it is 168 inches long. She then cuts it into 4 equal parts. How long is each part?

We Often Need to Divide Things into Fourths



Mrs. Ray cuts a pie into 4 equal parts. Each of the parts is one-fourth of the pie.

1. How many fourths are in a whole pie?

2. Draw a pie and cut it into 4 equal parts Color one-fourth of the pie red.

3. Draw a cake and cut it into 4 equal parts. Color one-fourth of the cake yellow.

One-fourth is written in numbers as $\frac{1}{4}$.

4. Draw a dozen Easter eggs. Color $\frac{1}{4}$ of them red, $\frac{1}{4}$ of them blue, $\frac{1}{4}$ of them yellow, and $\frac{1}{4}$ of them green. How many did you color blue?

To find $\frac{1}{4}$ of a number, divide the number by 4.

5. Find $\frac{1}{4}$ of each of these numbers:

12 32 20 28 8 16 24 36

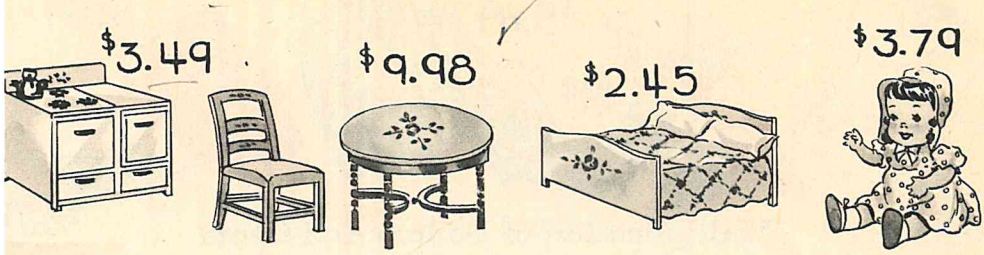
6. The vegetable man had 24 cucumbers. Mrs. Ray bought $\frac{1}{4}$ of them. How many did she buy?

7. Esther had 16 Easter eggs and gave $\frac{1}{4}$ of them to Ruth. How many did she give to Ruth?

8. Ida had 20¢ and Harold had $\frac{1}{4}$ as much. How much did Harold have?

Say or write the answers:

9.	$\frac{1}{2}$ of 8	$\frac{1}{2}$ of 14	$\frac{1}{2}$ of 18
10.	$\frac{1}{3}$ of 12	$\frac{1}{3}$ of 21	$\frac{1}{3}$ of 15
11.	$\frac{1}{4}$ of 16	$\frac{1}{4}$ of 28	$\frac{1}{4}$ of 20
12.	$\frac{1}{4}$ of 24	$\frac{1}{4}$ of 32	$\frac{1}{4}$ of 36



Addition and Subtraction of Dollars and Cents

1. Add.

		$0.64	$6.10	$0.89
$3.98	$1.34	1.25	.12	.67
4.10	.85	5.00	.97	.48
2.16	2.29	.84	2.25	.45

2. Subtract.

$4.92	$5.10	$3.35	$4.25	$2.18
2.45	2.50	.82	3.75	1.45

Copy neatly and add:

3. $8.16, $4.27, $9.25, $0.89, and $4.24

4. $3.75, $8.05, $0.01, $5.00, and $0.41

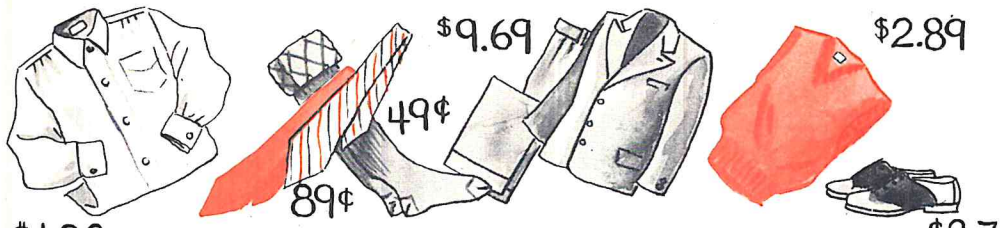
5. If you have $10 and spend $4.65, how much do you have left? (Write $10 as $10.00 before subtracting.)

6. How much less is $6.20 than $14.40?

7. Dora wants a doll, a doll bed, and a toy stove. Find the cost of all three.

8. How much more does the table and chair set cost than the toy stove?

9. Make up a problem about the cost of toys and give the problem to your class to find the answer.



Multiplication of Dollars and Cents

1. Find the cost of 3 shirts at $1.69 each.

Multiply $1.69 by 3. Remember to write the dollar sign in front of the number of dollars, and to write the cents point in front of the number of cents.

$1.69
×3
$5.07

2. Find the cost of 4 neckties at 89¢ each.

Write 89¢ as $0.89. Multiply $0.89 by 4. Remember to write the dollar sign and the cents point where they should be written.

$0.89
×4
$3.56

Multiply:

3.	$2.25 ×4	$0.67 ×4	$3.20 ×4	$0.34 ×4	$1.19 ×4
4.	$4.12 ×6	$3.12 ×7	$4.43 ×5	$7.85 ×5	$4.96 ×3

Mr. Grant is a salesman. He wants you to help him find the cost for each of these sales:

5. 3 pairs of shoes
6. 4 pairs of stockings
7. 6 shirts
8. 4 pairs of shoes
9. 2 neckties
10. 3 pairs of stockings
11. 8 shirts
12. 4 neckties

Dividing Dollars and Cents

1. Jerry had \$9.36 in his bank. He wanted to divide it into 3 equal parts to buy presents. How many dollars and cents will be in each of the equal parts?

Remember to write the dollar sign in front of the number of dollars and to write the cents point in front of the number of cents. The cents point in the quotient is exactly above the cents point of the number divided.

Divide

$$3\overline{)\$9.36}\quad \$3.12$$

Check

$$\begin{array}{r} \$3.12 \\ \times\ 3 \\ \hline \$9.36 \end{array}$$

2. Divide \$1.28 by 4. Check.

Think 1 divided by 4 is 0. You may write the **0** above 1.

Think 12 divided by 4 is 3. Write the **3** above 2.

Think 8 divided by 4 is 2. Write **2** above 8.

Divide

$$4\overline{)\$1.28}\quad \$0.32$$

Check

$$\begin{array}{r} \$0.32 \\ \times\ 4 \\ \hline \$1.28 \end{array}$$

Remember the dollar sign and cents point.

Divide and check:

3. $3\overline{)\$3.69}$ $3\overline{)\$9.63}$ $3\overline{)\$6.39}$ $3\overline{)\$3.36}$

4. $4\overline{)\$4.80}$ $4\overline{)\$8.40}$ $4\overline{)\$4.84}$ $4\overline{)\$8.48}$

5. $2\overline{)\$6.24}$ $2\overline{)\$4.82}$ $2\overline{)\$8.24}$ $2\overline{)\$2.80}$

6. $2\overline{)\$10.42}$ $2\overline{)\$14.40}$ $2\overline{)\$18.20}$ $2\overline{)\$12.64}$

The Country Store

Mr. Josh Carr was a storekeeper when your grandfather was a boy. Uncle Josh sold molasses, coal oil, and vinegar by the quart or gallon; he sold fruit and vegetables by the peck or bushel; and he sold sugar, coffee, flour, meal, and meat by the pound.

What things does your storekeeper sell by quarts or gallons? By pecks or bushels? By pounds or ounces?

You will need the tables of measures given below to understand how things are bought and sold, and to work the problems on the next page

Liquid Measure

2 pints (pt.) = 1 quart (qt.)
4 quarts (qt.) = 1 gallon (gal.)

Dry Measure

2 pints (pt.) = 1 quart (qt.)
8 quarts (qt.) = 1 peck (pk.)
4 pecks (pk.) = 1 bushel (bu.)

Weight Measure

16 ounces (oz.) = 1 pound (lb.)

Here Are Some of Uncle Josh's Problems

1. Uncle Josh had 31 gallons of vinegar in a barrel. How many quarts was this?

2. One day he sold 34 gallons of coal oil at 8¢ a gallon. How much did he get for this?

3. He sold 124 pecks of plums last year. How many bushels was this?

4. If he sold 23 bushels of plums at $2 a bushel, how much did he get for them?

5. He sold a dozen chickens to Mr. Hays. The chickens weighed 4 pounds each. How much did they all weigh?

6. He had 6 large hams in the store. Altogether they weighed 126 pounds. If they all weighed alike, how much did each ham weigh?

7. He sold a bushel of seed beans by the quart. How many quarts are in a bushel?

8. Uncle Josh sold 13 pecks of berries by the quart. How many quarts are in 13 pecks?

9. He sold 8 yards of lace to Mrs. Jones at 12 cents a yard. How much was this?

10. He also sold 4 yards of cloth to Mrs. Jones at 38 cents a yard. How much was this?

11. Mrs. Jones sold Uncle Josh 8 dozen eggs for $1.68. How much was this a dozen?

Tell the number that belongs in place of each ∗.

12. $\frac{1}{2}$ pound = ∗ ounces $\frac{1}{2}$ gallon = ∗ quarts

13. $\frac{1}{2}$ peck = ∗ quarts $\frac{1}{4}$ pound = ∗ ounces

14. 1 pint = ∗ quart 1 quart = ∗ gallon

Hurrah for the Blues and the Reds

Page 18 will tell you how to choose teams, and how to run the races. Check papers after each race.

Race 1. Write the sums. If you want to be sure you are right, check each answer.

1.	7	5	42	19	$2.17
	4	6	8	216	.69
	7	8	53	28	1.12
	5	9	4	34	4.17
2.	3	9	77	149	$4.34
	8	2	34	62	2.77
	5	8	9	338	.60
	4	1	0	20	4.14

Race 2. Subtract and check.

1.	24	33	25	347	$5.10
	19	8	20	250	3.75
2.	48	54	85	624	$3.48
	29	17	76	444	.85

Race 3. Multiply:

1.	28	43	54	426	$3.74
	×3	×4	×4	×3	×3
2.	31	23	21	392	$2.75
	×6	×5	×8	×2	×3

Race 4. Divide. Write station numbers, quotients, and remainders. If there is no remainder, write 0 for remainder.

1.	$4\overline{)48}$	$2\overline{)16}$	$3\overline{)21}$	$3\overline{)966}$
2.	$4\overline{)24}$	$3\overline{)36}$	$2\overline{)42}$	$2\overline{)824}$
3.	$4\overline{)18}$	$3\overline{)25}$	$2\overline{)13}$	$4\overline{)449}$
4.	$4\overline{)11}$	$3\overline{)16}$	$4\overline{)30}$	$4\overline{)847}$

Race 5. Find the right answer to each problem.

1. There are 48 paper napkins in a box. How many are in 3 boxes?

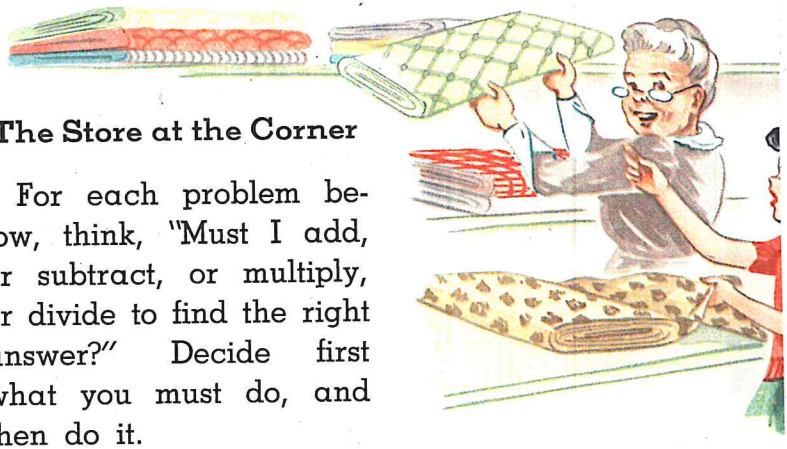
2. Jane had 144 paper napkins and used 53 of them. How many were left?

3. Jane used 29 paper napkins one day and 24 the next day. How many did she use both days?

4. Jane has 84 paper cups. If she uses 4 cups each day, how long will they last?

5. Jane says she has enough paper plates to last 4 weeks. How many days is that?

6. Jane rode 254 miles coming to camp and will ride 317 miles going home. How many miles in the round trip?



The Store at the Corner

For each problem below, think, "Must I add, or subtract, or multiply, or divide to find the right answer?" Decide first what you must do, and then do it.

1. Find the cost of 2 yards of dress goods at 42¢ a yard.

2. Alice bought $3.49 worth of dress goods and gave Mrs. Smith $5. How much change should Mrs. Smith give to Alice?

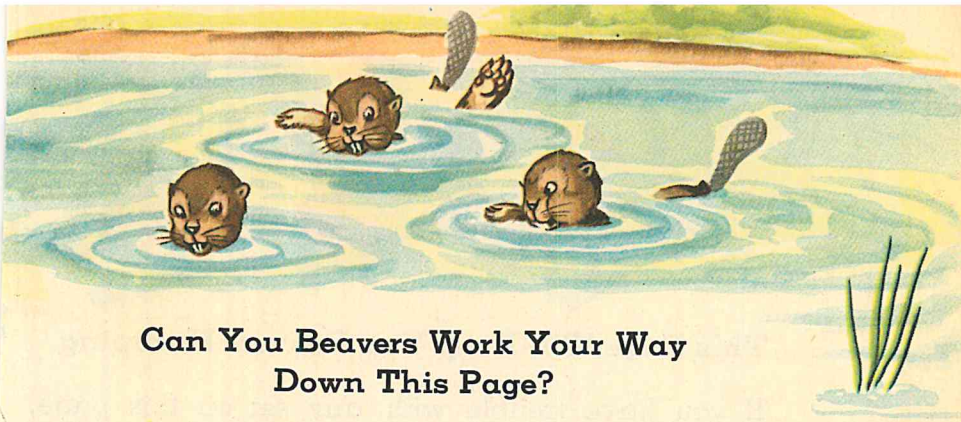
3. Last week Mrs. Smith bought 312 yards of brown cloth and 148 yards of blue cloth for her store. How many yards of both did she buy?

4. Last week Mrs. Smith earned $12.45, and this week she earned $14.20. How much more did she earn this week than last week?

5. Alice bought a piece of lace 24 feet long. How many yards was this?

6. If Alice had bought 7 yards of lace, how many feet of lace would she have had?

7. Alice bought 6 pairs of socks for $1.20. What was the cost of 1 pair?



Can You Beavers Work Your Way Down This Page?

If you make five mistakes or fewer, your work is waiting for you on page 255.

If you make more than five mistakes, you will find your work on page 254.

Write these answers:

1.	8×4	$4\times8+1$	$4\times9+3$
2.	5×4	$4\times6+3$	$4\times7+2$
3.	7×4	$4\times8+2$	$4\times6+2$
4.	9×4	$4\times7+1$	$4\times6+1$

Divide by 4. Write the quotients and remainders:

5.	19	35	26	18	38	27	21	31
6.	33	25	17	23	30	15	22	34
7.	11	14	37	10	13	29	9	39

Multiply each of these numbers by 4:

8.	76	48	89	42	83	71	28	52
9.	92	74	86	49	78	43	29	87
10.	51	14	88	37	91	59	73	38

Write the answers:

11.	427 $\times 4$	539 $\times 4$	1,274 $\times 4$	\$2.47 $\times 4$	\$0.79 $\times 4$
12.	$4\overline{)484}$	$4\overline{)1248}$	$4\overline{)2884}$	$4\overline{)\$8.48}$	$4\overline{)\$20.84}$

This Page Will Keep You Beavers Humping

If you have trouble with any set on this page, look in the **Help Column** at the right. There you will find the pages that will give you help.

Set 1. Write the products:

							Help Column
47	78	96	53	672	843	705	
×4	×4	×4	×4	×4	×4	×4	234

Set 2. Divide by 4. Write the quotients:

16 24 32 12 20 28 36 8 — 237

Set 3. Divide by 4. Write station number, quotient, and remainder for each one:

18 25 33 21 10 13 29 39 — 240

Set 4. Write the quotients:

$8\overline{)32}$ $5\overline{)20}$ $9\overline{)36}$ $7\overline{)28}$ $6\overline{)24}$ — 242

Set 5. Write the answers:

$\frac{1}{4}\times 32$ $\frac{1}{4}\times 24$ $\frac{1}{4}\times 16$ $\frac{1}{4}\times 28$ — 244

Set 6. Multiply by 4:

$1.35 $2.29 $0.84 $6.67 $0.49 — 246

Set 7. Divide by 4:

$8.40 $4.84 $16.44 $20.40 $36.88 — 247

$12.80 $44.80 $48.48 $80.40 $32.60

This Page Will Keep You Beavers Jumping

You will jump from addition to subtraction, or to multiplication, or division. You will not know which unless you think carefully. Draw a picture to explain why you work each problem as you do.

1. Herb had 13 marbles in one pocket, 4 in another, and 2 in his shoe. How many marbles did he have in all?

2. Four pounds of cheese cost $1.64. What is the cost of 1 pound of cheese?

3. If there are 12 crayons in a box, how many crayons are in 8 boxes?

4. There are 24 cookies in a box. If $\frac{1}{2}$ of the cookies are coconut, how many coconut cookies are in the box?

5. There are 4 quarts in a gallon. How many quarts are in 7 gallons? In $\frac{1}{2}$ gallon?

6. Mother ordered 2 quarts of milk. The milkman had no quart bottles of milk. How many pint bottles should he leave at the door?

7. Jack paid 48 cents for 4 dozen cookies. How much did a dozen cookies cost?

8. If I pay 23¢ for a pint of oysters, how much should I pay for a quart of oysters?

Swimming Is Easy Now

1.

67	84	53	29	701	286	345
×4	×4	×4	×4	×4	×4	×4

2.

24	41	34	40	324	103	423
×6	×8	×7	×9	×5	×7	×4

3. Divide by 4. Write quotients and remainders.

17 31 37 7 11 19 33 9

4. Write the quotients:

$4\overline{)884}$ $4\overline{)448}$ $4\overline{)1{,}240}$ $4\overline{)3{,}280}$ $4\overline{)3{,}684}$

5. There are 7 days in a week. How many days are in 4 weeks?

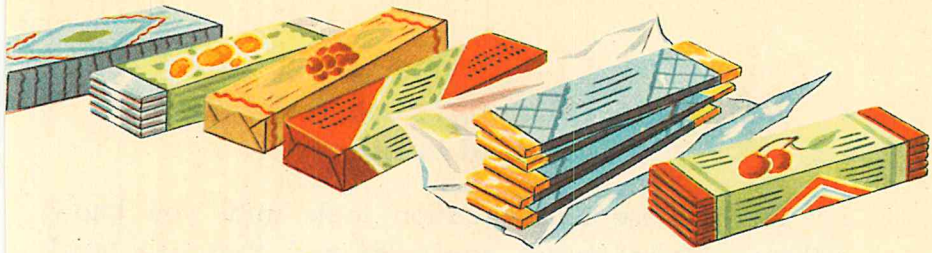
6. How many weeks in 21 days?

7. If 9 chairs are in a row, how many chairs are in 4 rows?

8. Find the cost of 4 dinners at 65¢ each.

9. Mrs. Robb is 32 years old, and Lena Robb is $\frac{1}{4}$ as old. How old is Lena Robb?

10. If 3 sweaters cost $6.69 and all cost alike, what is the cost of 1 sweater?



Learning to Multiply with 5

There are 5 sticks of gum in 1 package. How many sticks of gum are there in 6 packages? Will you need to open all 6 packages to find how many sticks of gum are in them? Multiply 5 by 6 and you will know how many sticks of gum are in 6 packages.

Look at this table to find out how much 6×5 is.

Multiplying is a short way of adding.

5	5	5	5	5	
5	5	5	5	5	
	5	5	5	5	Two 5's are . . . 10
		5	5	5	Three 5's are . . . 15
			5	5	Four 5's are . . . 20
				5	Five 5's are . . . 25
					Six 5's are . . . 30

1. There are 5 players on a basketball team. How many players are needed for 2 teams?

2. Ann bought 3 ice-cream cones at 5¢ each. How much did she pay for all of them?

More Multiplication Facts to Remember and to Use

Study these multiplication facts until you know them. Make helper cards for any that are hard for you.

$1 \times 5 = 5$	$4 \times 5 = 20$	$7 \times 5 = 35$
$2 \times 5 = 10$	$5 \times 5 = 25$	$8 \times 5 = 40$
$3 \times 5 = 15$	$6 \times 5 = 30$	$9 \times 5 = 45$

1. Say or write the products:

5	5	5	5	5	5	5	5	5	5
$\times 7$	$\times 6$	$\times 4$	$\times 8$	$\times 3$	$\times 9$	$\times 1$	$\times 5$	$\times 2$	$\times 0$

Multiply. Check by going over your work again.

2.

35	52	65	15	215	354	512
$\times 3$	$\times 5$	$\times 2$	$\times 8$	$\times 4$	$\times 6$	$\times 7$

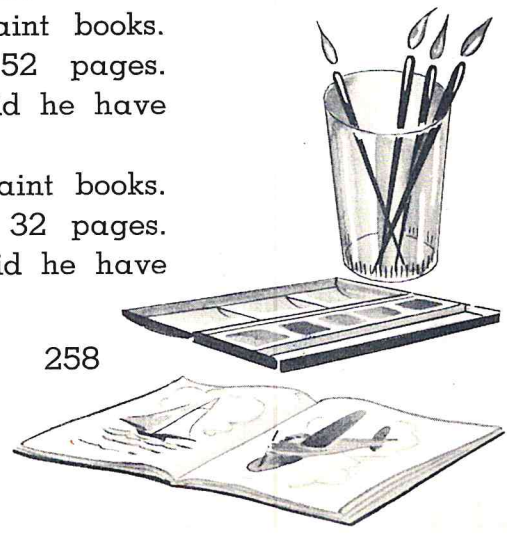
3.

50	25	53	55	425	530	458
$\times 6$	$\times 7$	$\times 8$	$\times 9$	$\times 3$	$\times 9$	$\times 2$

4. Mr. Smith has a school supply store. One day he sold 8 paint brushes at 5¢ each. How much did he get in all?

5. Roy had 6 paint books. Each book had 152 pages. How many pages did he have to paint in all?

6. Jack had 5 paint books. Each of them had 32 pages. How many pages did he have to paint in all?



There Are Four New Multiplication Facts on This Page

Say or write these products:

1. 6×5, and 5×6 9×5, and 5×9
2. 8×5, and 5×8 7×5, and 5×7

Study these multiplication facts until you know them. Only those in red are new.

$5\times1=5$	$5\times4=20$	$5\times7=35$
$5\times2=10$	$5\times5=25$	$5\times8=40$
$5\times3=15$	$5\times6=30$	$5\times9=45$

Study these times-and facts. Be able to say each one with the answer covered.

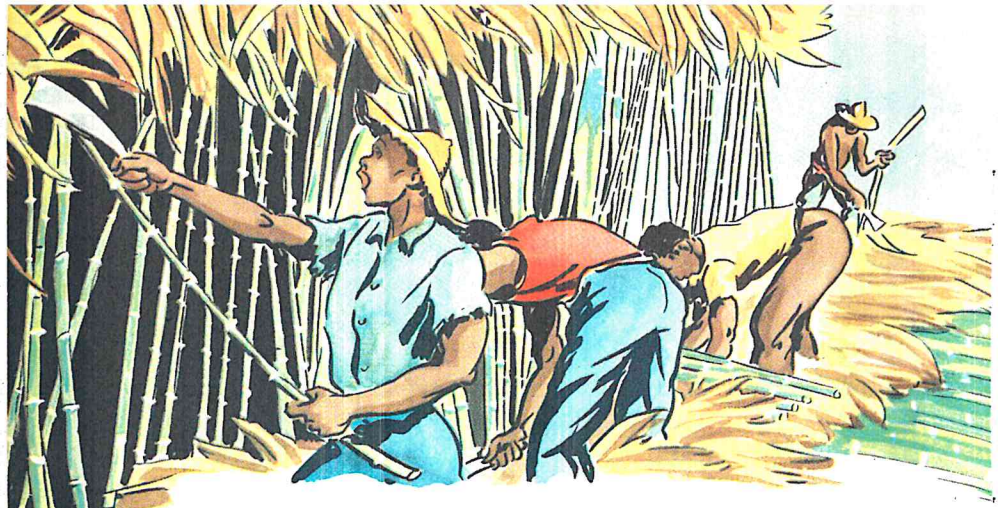
3. $5\times4+2=22$ $5\times7+1=36$ $5\times3+4=19$
4. $5\times9+3=48$ $5\times5+2=27$ $5\times8+1=41$
5. $5\times6+4=34$ $5\times1+3=8$ $5\times0+4=4$

Say these times-and facts:

6. $5\times1+1$ $5\times5+1$ $4\times1+3$ $4\times4+2$
7. $3\times6+2$ $3\times4+1$ $3\times5+1$ $5\times1+2$
8. $5\times7+3$ $5\times4+3$ $5\times3+2$ $3\times9+1$

Write the products:

9.	131 $\times5$	213 $\times5$	518 $\times4$	469 $\times3$	214 $\times5$	254 $\times4$
10.	654 $\times5$	476 $\times5$	954 $\times3$	356 $\times2$	672 $\times4$	634 $\times3$
11.	510 $\times5$	530 $\times5$	518 $\times5$	400 $\times5$	340 $\times5$	543 $\times5$



The World's Biggest Sugar Bowl

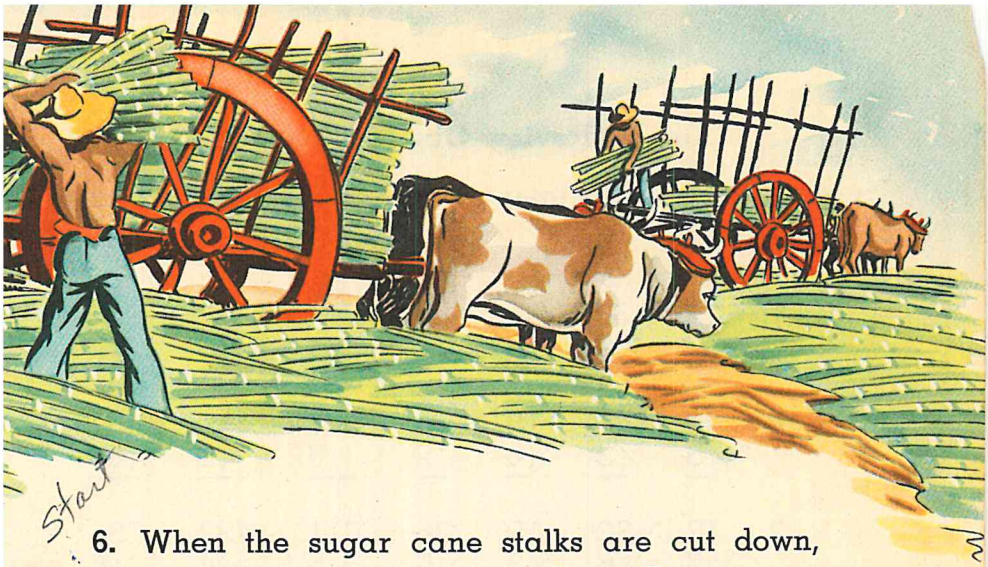
1. More cane sugar is grown in Cuba than any other place in the world. Can anyone tell the class how cane sugar is made?

2. Cuba is one of our near neighbors. It is just 90 miles across the water from Florida. Can you name a place that is about 90 miles from your home?

3. Pedro's father owns a large sugar plantation. Pedro likes to watch the sugar cane grow. He saw one stalk that was 11 feet tall, and another that was 6 feet taller. How tall was the second stalk?

4. Some cane stalks may be 20 feet tall, and others only $\frac{1}{4}$ as tall. How tall are the shorter cane stalks?

5. In the picture you may see that sugar cane grows in "joints." One stalk has 30 joints, and another stalk has 20 joints. How many more joints has the first stalk than the second?



6. When the sugar cane stalks are cut down, a workman takes the cane to the mill in an ox cart. If the man takes 24 tons to the mill in one day, how much can he take there in 5 days?

7. Can you tell the class of something that we buy by the ton? A ton is 2,000 pounds. Can you think of something that weighs 100 pounds? 1,000 pounds? 1 ton?

8. One ship brought 566 tons of sugar from Cuba to our country. Another ship brought 279 tons. How many tons did the two ships together bring?

9. Sugar is sold in 100 lb. sacks. How many pounds are in a sack that is half full?

10. Some sugar from Cuba is at your grocery. If it is 6¢ a pound, how much will 5 pounds cost?

11. Mother uses some of the sugar from Cuba to make cookies for you. She will need 4 cups of sugar. If she makes only $\frac{1}{2}$ of the recipe, how many cups should she use?

Let Us Review Our Multiplication

Write the products. Check by going over your work.

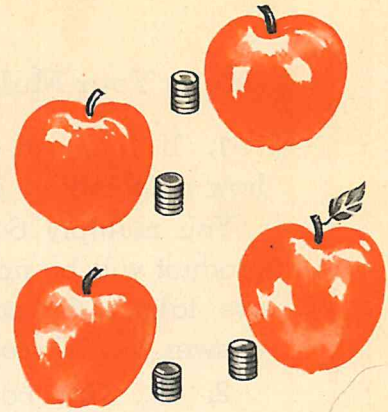
	a	b	c	d	e	f	g
1.	72	38	40	89	564	378	935
	×3	×5	×4	×2	×4	×3	×2
2.	58	45	15	13	572	419	451
	×5	×3	×4	×2	×5	×5	×4
3.	47	30	19	36	611	432	156
	×5	×6	×3	×5	×5	×4	×5
4.	28	39	84	90	710	430	580
	×4	×3	×5	×4	×2	×5	×3
5.	43	30	15	41	600	725	438
	×7	×8	×9	×4	×5	×4	×4
6.	52	43	37	94	301	130	668
	×6	×5	×4	×5	×5	×5	×4

Here is a way you can make up your own multiplication practice. Think of any 3-figure number and write it four times. Multiply one of the numbers you have written by 2, another by 3, another by 4, and another by 5. Have some child in class check your work.

7. An airplane pilot flies 238 miles an hour. How far can he fly in 5 hours?

8. Find the cost of 5 books at $1.32 each.

Do You Know How to Name an Answer?



Find the cost of 4 apples at 5 cents each.

Both apples and cents are in the problem. Will the answer be named apples, or will it be named cents? Why?

Write 5¢ four times in a column and add. The sum of four 5's is 20. You are adding cents, so the answer is 20¢.

Multiplying is a short way of adding. The cost of 1 apple is 5¢. Then the cost of 4 apples is 4 times 5¢ or 20¢.

$$\begin{array}{r} 5¢ \\ \times 4 \\ \hline 20¢ \end{array}$$

1. Mrs. Cole uses 6 quarts of milk a day. How many quarts will she use in 5 days?

Will the answer be named quarts or days? Why?

2. Mrs. Black uses 4 eggs in a cake. How many eggs would she use in 8 cakes?

3. The Jones family uses 25 pounds of sugar a month. How much will they use in 6 months?

4. Tom drinks 7 pints of cream a week. How much will he drink in 4 weeks?

5. If there are 5 peas in a pod, how many peas will there be in 8 pods?

6. Multiply. Check by going over your work.

$$\begin{array}{rrrrrr} 213 & 465 & 344 & 568 & 317 & 492 \\ \times 6 & \times 5 & \times 6 & \times 3 & \times 3 & \times 4 \end{array}$$

Make Your Multiplication as Easy as You Can

1. If 1 box of canned goods weighs 64 pounds, how much will 4 boxes weigh?

You multiply 64 pounds by 4. The product will be named pounds, for you are taking 64 pounds 4 times. The answer is 256 pounds.

64 pounds
x4
256 pounds

2. Mr. Hill bought 75 chickens that weighed 3 pounds each. How much did they all weigh?

The answer will be named pounds. Why?

One way to find the answer is to take 3 pounds 75 times.

One Way
3 pounds
x75
225 pounds

Easier Way
75
x3 pounds
225 pounds

An easier way to find the answer is to multiply 75 by 3 and name the answer pounds.

3. Find the weight of 96 bags of coffee each weighing 3 pounds. Multiply the easier way. Will the answer be named bags or pounds?

4. Find the cost of 54 pounds of sugar at 6¢ a pound.

5. Mrs. Gay uses 4 quarts of milk a day. How much will she use in 31 days?

6. Find the cost of 48 oranges at 5¢ each.

7. At a party, each child is given 4 pansies. How many pansies are needed for 36 children?

8. Dick has 4 rows of onions with 76 onions in each row. How many onions does he have in all?

Do You Always Get the Right Answer?

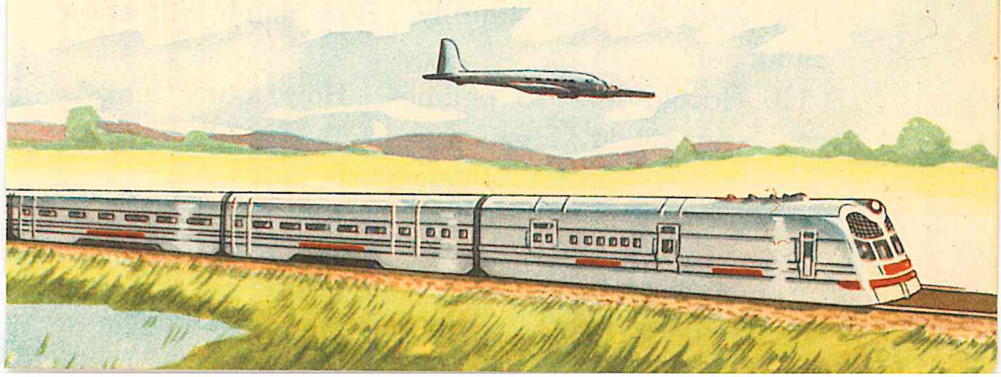
If you make mistakes in multiplying, practice again on pages 258, 262, and below.

	a	b	c	d	e	f	g
1.	73 ×4	95 ×3	25 ×2	29 ×4	743 ×3	904 ×4	410 ×7
2.	37 ×5	43 ×8	18 ×4	72 ×3	502 ×8	143 ×6	508 ×5
3.	51 ×7	52 ×6	68 ×3	62 ×5	423 ×7	136 ×2	201 ×3
4.	94 ×5	51 ×9	97 ×2	34 ×3	302 ×9	104 ×8	264 ×4
5.	58 ×5	45 ×4	86 ×2	34 ×2	621 ×5	432 ×9	408 ×2

6. At the rate of 360 miles an hour, how far can an airplane travel in 5 hours?

7. If an airplane ticket for one person costs $32.50, what will tickets for 5 persons cost?

8. A streamline train is going 85 miles an hour. An airplane is going 3 times as fast. How fast is the airplane going?



Dividing by 5 Is Easiest of All Our Dividing

Study these division facts until you know them.

$5 \div 5 = 1$	$20 \div 5 = 4$	$35 \div 5 = 7$
$10 \div 5 = 2$	$25 \div 5 = 5$	$40 \div 5 = 8$
$15 \div 5 = 3$	$30 \div 5 = 6$	$45 \div 5 = 9$

Say the number that belongs in place of each $*$.

	a	b	c
1.	$* \times 5 = 15$	$* \times 5 = 35$	$* \times 5 = 20$
2.	$* \times 5 = 30$	$* \times 5 = 40$	$* \times 5 = 10$
3.	$* \times 5 = 5$	$* \times 5 = 25$	$* \times 5 = 45$
4.	$15 \div 5 = *$	$35 \div 5 = *$	$20 \div 5 = *$
5.	$30 \div 5 = *$	$40 \div 5 = *$	$10 \div 5 = *$
6.	$5 \div 5 = *$	$25 \div 5 = *$	$45 \div 5 = *$

Write the quotients:

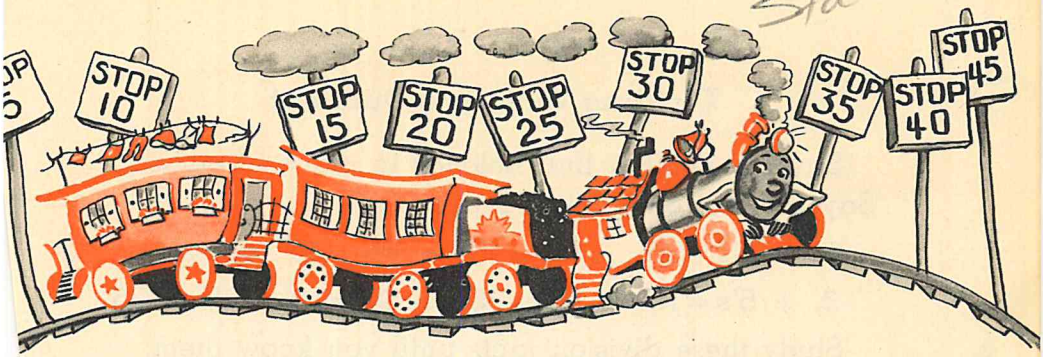
	a	b	c	d	e
7.	$5\overline{)35}$	$5\overline{)20}$	$5\overline{)15}$	$5\overline{)40}$	$5\overline{)35}$
8.	$5\overline{)155}$	$5\overline{)455}$	$5\overline{)105}$	$5\overline{)255}$	$5\overline{)305}$
9.	$5\overline{)100}$	$5\overline{)250}$	$5\overline{)300}$	$5\overline{)150}$	$5\overline{)450}$

10. Ann has 35 cards which she wishes to divide into 5 equal piles. How many will there be in each pile?

11. If you divide 350 marbles into 5 piles, how many will be in each pile?

12. The 5 Adams children received $10, which they were to share equally. How much will each child get?

13. Harold has 45 pennies. How many nickels could he get for them?



Dividing by 5 and Using Station Numbers

Joe has 28¢. How many ice-cream cones at 5¢ each can he buy? How much will he have left over?

To divide a number by 5 that cannot be divided evenly by 5, think back to the nearest smaller number that can be divided evenly by 5. To divide 28 by 5, think back to 25. The number that you think back to is a station number for 5.

Divide each number below by 5. Think back to the station number, then say quotient and remainder. The station number for each column is in a ring at the top.

(5)	(10)	(15)	(20)	(25)	(30)	(35)	(40)	(45)
6	11	16	21	26	31	36	41	46
7	12	17	22	27	32	37	42	47
8	13	18	23	28	33	38	43	48
9	14	19	24	29	34	39	44	49

Tell how many ice-cream cones you could get, and how much you would have left over, if you had this much money:

1.	37¢	43¢	23¢	47¢	18¢	44¢	36¢
2.	11¢	29¢	46¢	34¢	17¢	31¢	49¢

Dividing With 5 as Quotient

Say the number that belongs in place of each ∗. Say the first one, "Six 5's are 30."

1. ∗ 5's = 30 ∗ 5's = 45 ∗ 5's = 20 ∗ 5's = 40

2. ∗ 5's = 15 ∗ 5's = 35 ∗ 5's = 10 ∗ 5's = 25

Study these division facts until you know them.

$5 \div 1 = 5$	$20 \div 4 = 5$	$35 \div 7 = 5$
$10 \div 2 = 5$	$25 \div 5 = 5$	$40 \div 8 = 5$
$15 \div 3 = 5$	$30 \div 6 = 5$	$45 \div 9 = 5$

Write the quotients:

3. $8\overline{)40}$ $7\overline{)35}$ $9\overline{)45}$ $2\overline{)10}$ $6\overline{)24}$

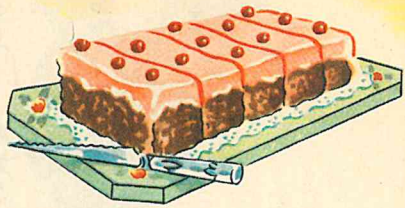
4. $2\overline{)20}$ $8\overline{)32}$ $5\overline{)25}$ $6\overline{)30}$ $3\overline{)15}$

5. The boys and girls are planning a school picnic. Jack says the butcher told him there are 7 frankfurters in a pound. How many pounds will they buy to get 35 frankfurters?

6. They want 40 pints of milk for the picnic. How many gallons will this be? There are 8 pints to a gallon.

7. The children will ride to the picnic in automobiles. If 6 children can ride in each automobile, how many automobiles will be needed to take 30 children?

Using One Fifth at the School Picnic



The teacher cut a cake into 5 equal parts. Each part is one-fifth of the cake. One-fifth is written in figures as $\frac{1}{5}$.

1. You would like this cake. Would you rather have $\frac{1}{5}$ of it or $\frac{1}{4}$ of it? Draw a picture to show why.

2. Would you rather have $\frac{1}{2}$ of a cake or have $\frac{1}{3}$ of it? Draw a picture to show why.

3. The teacher cut a pie into fifths. Draw a picture to show the pie after she had cut it.

4. Jack ate $\frac{1}{3}$ dozen stuffed eggs, and Tom ate $\frac{1}{4}$ dozen stuffed eggs. How many eggs did each eat? Which is more, $\frac{1}{3}$ dozen or $\frac{1}{4}$ dozen? Draw some eggs to show that your answer is right.

5. Jim bought some candy. He had 15¢ and spent $\frac{1}{5}$ of it. How much did he spend? Draw a picture to show 15¢ divided into 5 equal piles. Color red the part that Jim spent.

6. Tommy was at bat 20 times and hit the ball $\frac{1}{5}$ of the times he was at bat. How many times did he hit the ball?

How Some Boys Earned Money

Ted, Ray, and Billy worked with a man last winter. They helped catch wild animals. Then they sold the furs and made money.

1. They sold fox furs for $24.60. If the three boys divided this money equally, how much did each get?

2. They sold 9 furs at 54¢ each. How much did they get for all?

3. The traps they used cost $15.90. What was each boy's share of this cost?

4. They sold 5 skunk furs at $1.75 each. How much were they paid for all?

Many of the first men who came to this country caught wild animals and sold their furs. Can you find a good story about white men buying furs from the Indians?

5. Write the products:

$7.43	$4.29	$1.63	$8.10	$0.87	$1.35
×5	×5	×5	×5	×5	×5

6. Write the quotients. Check by multiplying.

5)$15.50 5)$5.00 5)$25.50 5)$1.50 5)$3.50

Can You Think of the Right Word?

Begin at the top of your paper and write the numbers from 1 to 13 under each other down the left side. After each number you have written, write the answer to the problem of that number. The answer to 1 is "sum."

1. When you add, the answer is called the . . .

2. In multiplication, the answer is called the . . .

3. When you divide, the answer is called the . . .

4. When you subtract, the answer is called the . . .

5. Study the fractions: $\frac{1}{5}$, $\frac{1}{3}$, $\frac{1}{4}$. The fraction that will give me the largest piece of pie is . . .

6. Study the fractions: $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{3}$. The fraction that will give me the largest part of a bag of marbles is . . .

7. Write five dollars and twenty-seven cents. Remember the dollar sign and the cents point.

8. Write five thousand nine hundred six.

9. A quart bottle of milk is too much to drink at one time. I buy the next smaller size, which is a . . .

10. A farmer puts 4 pecks of potatoes into a large basket. Then he has 1 . . . of potatoes in the large basket.

11. A "quarter" is the name for one of these fractions: $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, $\frac{1}{5}$. Which one is it?

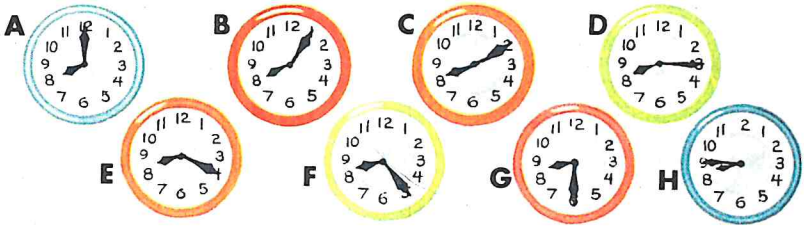
12. How many quarts are in a peck?

13. How many quarter dollars does it take to make a dollar?

The Long Hand of the Clock Counts by 5's

Every time the long hand moves from any number on the clock face to the next number, 5 minutes have passed.

The long hand of clock A is at 12. The time is exactly 8 o'clock.



The long hand of clock B is at 1. The time is 5 minutes **past** 8 o'clock.

The long hand of clock C is at 2. The time is 10 minutes **past** 8 o'clock.

Tell where the long hand is on each of the other clocks in the picture. Tell what time it is by each clock.

Clock B shows the time as 8:05 o'clock. Clock C shows the time as 8:10 o'clock.

Show how you would write 15 minutes **past** 8 o'clock in figures.

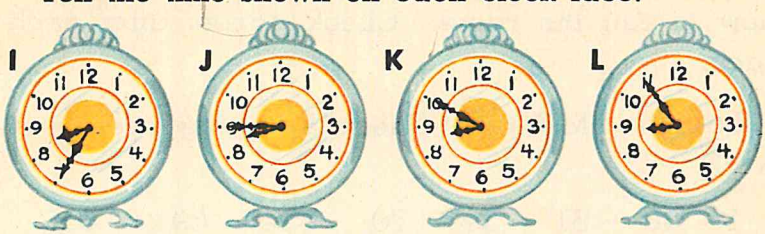
Show how you would write 25 minutes **past** 8 o'clock in figures.

Read each of the times below. Read the first one, "20 minutes **past** 8 o'clock."

8:20 9:15 10:10 12:30 7:25 6:05

Around the Clock

Tell the time shown on each clock face.



The long hand of clock L is at 11. It will have to move 5 minutes before it reaches 12. The time may be read as 5 minutes **to** 9 o'clock.

The long hand of clock K will have to move . . . minutes before it reaches 12. The time may be read as . . . minutes **to** 9 o'clock.

Draw a clock face with long hand at 8. How many minutes **to** the next hour does it show?

Draw a clock face with long hand at 9. How many minutes **to** the next hour does it show?

Draw a clock face with long hand at 10. How many minutes **to** the next hour does it show?

Draw a clock face with long hand at 11. How many minutes **to** the hour does it show?

Where would the long hand be at a quarter **past** the hour?

Where would the long hand be at a quarter **to** the hour?

Where would the long hand be at half **past** the hour?

The Blues and the Reds Multiply and Divide

Page 18 will tell you how to choose teams and how to run the races. Check papers after each race.

Race 1. Multiply. Check by going over your work.

1.	48 ×4	51 ×4	39 ×4	70 ×4	634 ×4	691 ×5	486 ×4
2.	50 ×5	87 ×5	86 ×5	49 ×5	374 ×5	309 ×4	720 ×4
3.	54 ×6	35 ×8	24 ×7	78 ×3	431 ×9	230 ×6	414 ×8

Race 2. Divide. Check by multiplying.

1.	$3\overline{)369}$	$2\overline{)246}$	$4\overline{)168}$	$5\overline{)155}$	$6\overline{)186}$
2.	$4\overline{)364}$	$4\overline{)124}$	$4\overline{)408}$	$4\overline{)160}$	$4\overline{)328}$
3.	$5\overline{)150}$	$5\overline{)255}$	$5\overline{)305}$	$5\overline{)450}$	$5\overline{)355}$
4.	$2\overline{)428}$	$2\overline{)640}$	$3\overline{)690}$	$3\overline{)126}$	$3\overline{)963}$
5.	$7\overline{)357}$	$9\overline{)459}$	$8\overline{)328}$	$6\overline{)306}$	$9\overline{)360}$

Do You Know the Signs?

Read and say the answers. Read the first one, "3 and 4 are 7."

1.	3+4	7−2	5×6	32÷4
2.	7+6	13−5	7×4	24÷8
3.	9+2	11−3	4×9	21÷3
4.	3+5	8−4	6×2	28÷7
5.	8+7	15−6	8×3	45÷9
6.	3+7	10−6	3×9	18÷6
7.	6+9	15−8	2×6	27÷3
8.	8+5	13−6	7×3	40÷8
9.	5+9	14−8	9×5	12÷6
10.	1+7	8−3	6×3	32÷8
11.	9+8	17−8	9×3	0÷4
12.	2+7	9−5	8×4	35÷7
13.	8+3	11−5	5×8	30÷6
14.	0+8	8−0	0×4	24÷6
15.	3+9	12−5	4×8	36÷9
16.	5+7	17−9	3×8	18÷3
17.	7+8	11−4	4×7	28÷4
18.	9+4	15−7	5×9	24÷3
19.	6+3	11−5	4×6	18÷2
20.	4+8	14−9	9×4	40÷5

Banana Land

1. José (ho-say) lives in a nearby country called Costa Rica. Many of the bananas you see in your fruit store come from his country. Some banana leaves are 8 feet long and 2 feet wide. Draw a banana leaf this size on the blackboard.

2. José is climbing a banana palm that is 27 feet high. If the bunch of bananas is growing 12 feet from the top of the tree, how high must he climb to cut off the bunch of bananas?

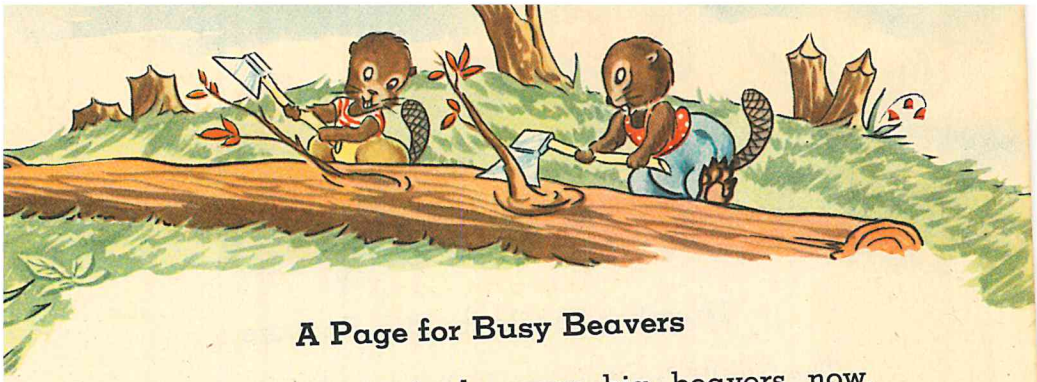
3. This donkey is carrying green bananas to the ship that is going to bring them to you. Why are the bananas shipped green?

4. If one donkey can carry 4 bunches of bananas, how many bunches can 62 donkeys carry?

5. Bananas are cut from the bunches in "hands." The bananas on the "hand" are called "fingers." How many fingers are there on the hand in the picture?

6. How many bananas would there be on 5 hands like the one in the picture?

7. If there were 14 bananas on one hand, how many would there be on 5 such hands?



A Page for Busy Beavers

You are getting to be very big beavers now. You can do this page very easily.

Write the answers:

1.	$5\times8+2$	$5\times7+3$	$5\times6+2$
2.	$5\times3+4$	$5\times8+3$	$5\times6+3$
3.	$5\times7+4$	$5\times0+2$	$5\times9+3$

Write the products:

4.	384×5	579×5	876×5	604×5	981×5	784×5
5.	967×5	543×5	286×5	170×5	428×5	372×5

Write how many 5's and how many over for each of these numbers. Write the first answer: 9 r 2

6.	47	28	13	23	16	34	32	44
7.	14	19	22	48	42	31	17	24
8.	39	27	38	15	29	26	46	43

If you made five mistakes or fewer, your next page will be 279.

If you made more than five mistakes, page 278 will help you.

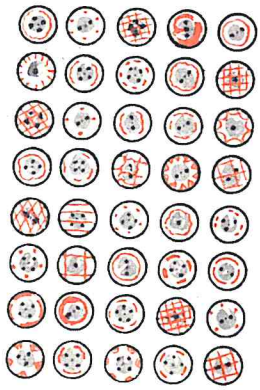
stop

Number Trails for Big Beavers

The multiplication and division facts are easy to learn in groups of 4. Study these two multiplication and two division facts that go together to make a group of 4.

$5 \times 8 = 40$ $8 \times 5 = 40$ $40 \div 8 = 5$ $40 \div 5 = 8$

These 4 facts can be made more real by placing 40 buttons as shown in the picture. Use the picture to explain these:



1. There are 8 rows with 5 buttons to a row. $8 \times 5 = 40$

2. There are 5 columns with 8 buttons to a column. $5 \times 8 = 40$

3. There are 40 buttons placed in 8 equal rows. $40 \div 8 = 5$

4. There are 40 buttons placed in 5 equal columns. $40 \div 5 = 8$

Write 3 other number facts that go with each fact below. Draw a picture to show each fact given below and the 3 facts that go with it.

5. $5 \times 4 = 20$ $32 \div 8 = 4$ $9 \times 5 = 45$ $35 \div 7 = 5$

6. $30 \div 5 = 6$ $4 \times 9 = 36$ $18 \div 3 = 6$ $9 \times 2 = 18$

7. $6 \times 4 = 24$ $27 \div 3 = 9$ $4 \times 7 = 28$ $14 \div 7 = 2$

Work for Beaver Builders

Work this page quickly and neatly. Then form a band of five beavers. Work the page again and mark each other's paper.

Write the products:

1.	585 ×5	564 ×5	568 ×5	978 ×3	421 ×3	685 ×4	983 ×2
2.	210 ×4	394 ×5	375 ×5	195 ×2	572 ×3	280 ×4	460 ×5
3.	765 ×4	481 ×5	286 ×5	173 ×5	387 ×2	870 ×3	203 ×5
4.	394 ×4	576 ×4	689 ×5	196 ×5	540 ×5	276 ×2	572 ×3

Write the quotients:

5. $4\overline{)328}$ $3\overline{)159}$ $2\overline{)184}$ $5\overline{)255}$ $3\overline{)246}$

Write the quotients and remainders:

6. $5\overline{)49}$ $3\overline{)25}$ $4\overline{)33}$ $2\overline{)15}$ $5\overline{)37}$

Swimming Along

1. Jenny had a ribbon 35 inches long. She gave $\frac{1}{5}$ of it to Alice. How many inches did she give to Alice?

2. Albert walks 6 miles each day as he comes to school and goes back home. How many miles will he walk in 5 days?

3. Draw 6 clock faces. Show each of these times.

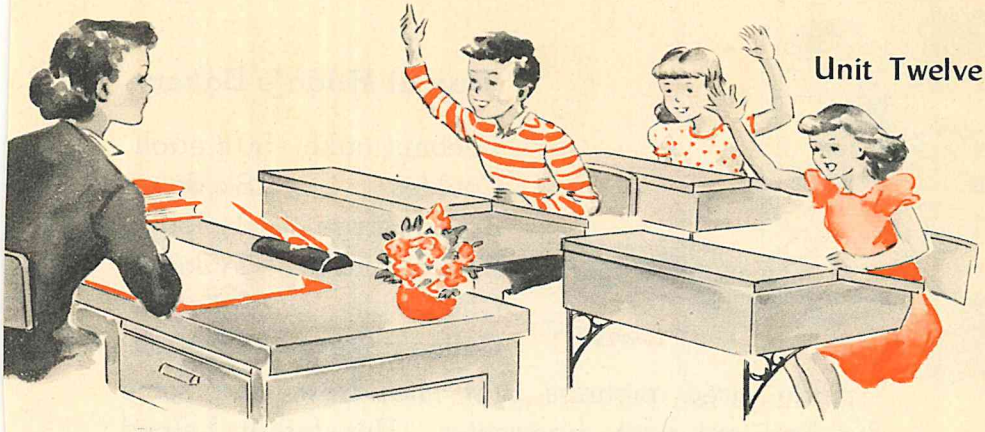
A. 10 minutes to 3
B. A quarter to 5
C. Half past 6
D. 25 minutes past 9
E. A quarter past 7
F. 5 minutes to 1

4. There are 360 eggs in a full case of eggs. The grocer said he sold $\frac{1}{4}$ of these. How many eggs had he sold?

5. There were 9 cookies in a row and 3 rows in the box. How many cookies in the box?

6. There are 240 small oranges in a box. A grocer bought 6 boxes. How many oranges was this?

7. Mr. and Mrs. Jones took Mary and Tom to a restaurant for dinner. The dinner for each cost $1.10. How much did all 4 dinners cost?



The Corner Store

"You have studied hard this year," Miss Taylor said. "How would you like to play store for the rest of the time?"

Every hand went up.

"Who wants to be storekeeper?" Miss Taylor asked. Again every hand went up.

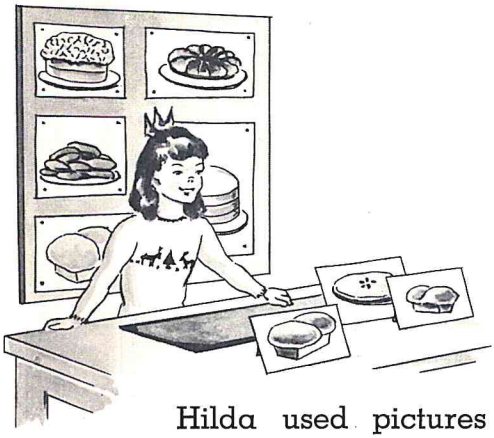
"We cannot have so many storekeepers. There would be no one to buy," Miss Taylor said.

"Let us have a new storekeeper each day and keep on playing store till each one has a turn," Tom said.

They all agreed that this was a good idea. They planned to have the store in the corner of their room and to call it the Corner Store.

Hilda said, "I want a bakery. I help my father and know how to sell."

"That is fine," Miss Taylor said. "Tomorrow Hilda will keep the Corner Bakery. The next day someone else may keep another kind of store."



Buy at Hilda's Bakery

Coconut cake	50¢ each
Cookies	18¢ dozen
Bread, large	13¢ loaf
Bread, small	7¢ loaf
Cherry pie	32¢ each
Coffee cake	24¢ each

Hilda used pictures that she drew and some she had cut from magazines. Her father helped her make the price list.

1. David said, "I want a coconut cake, a dozen cookies, and a large loaf of bread. How much will I have to pay?"

2. Sally said, "I want 3 small loaves of bread. How much will they cost?"

3. Joan said, "I want a cherry pie, a dozen cookies, and a coffee cake. How much are they?"

4. Robert said, "I like cherry pie. Give me 9 of them. How much will they all cost?"

5. Grace said, "I will take half a dozen cookies, please. How much do I owe you?"

6. Lucy said, "I have 60¢ to spend. Is that enough to buy a small loaf of bread, a cherry pie, and a coffee cake?"

7. Pat said, "Here is a dollar. I want a cherry pie. How much change do I get back?"

8. Ethel asked, "How much will 5 large loaves of bread cost?"

Edgar's Corner Store Sells Fine Groceries

Sugar	6¢ lb.
Flour	83¢ bag
Crackers	18¢ box
Peaches	21¢ can
Eggs	42¢ doz.
Butter	48¢ lb.
Cheese	32¢ lb.
Milk	12¢ qt.

1. Edna bought a bag of flour, a can of peaches, and a pound of butter. How much did she pay?

2. Tom bought a box of crackers, a pound of butter, a pound of cheese, and a dozen eggs. How much did he have to pay?

3. Find the cost of 8 cans of peaches; of 3 pounds of butter; of 25 pounds of sugar; of 5 bags of flour; of 6 dozen eggs.

4. Pat bought $\frac{1}{4}$ pound of cheese and a box of crackers. How much did they both cost?

5. Joan bought a bag of flour, a can of peaches, and 2 pounds of sugar. How much did they all cost?

6. If I have $1 and buy a bag of flour, how much change will I get?

7. Try to bring a grocery bill to school. Copy it on the blackboard. What does the grocer write on his bill?

8. Make out a grocery bill for what Joan bought.

May's Corner Lunchroom Serves Homecooked Food

Bread, butter	7¢	Macaroni with cheese	18¢
Steak	25¢	Salad	12¢
Milk	5¢	Ice cream	5¢
String beans	8¢	Soup	10¢
Cabbage	6¢	Cake or pie	7¢
Baked ham	22¢	Candy	4¢
Potatoes	9¢		

May gave each child a sheet of paper and asked him to write what he thought would be a good dinner. Can you find out what each would have to pay?

Edna	Sally	Pat	Joan
Steak	Salad	Steak	Steak
Milk	Ice cream	String beans	Potatoes
Bread, butter	Cake	Potatoes	Baked ham
Soup	Pie	Soup	Macaroni
Ice cream	Candy	Ice cream	Ice cream
Rose	**Tom**	**Ethel**	**Bob**
Baked ham	Macaroni	Soup	Ice cream
String beans	Salad	Salad	Steak
Milk	Soup	Potatoes	Candy
Pie	String beans	Cake	Baked ham
Bread, butter	Cake	Candy	Pie

1. Which child do you think chose the best dinner?

2. Which child do you think chose the poorest dinner?

3. Choose a dinner for yourself and find how much it will cost.

Jim's Corner Meat Market Sells the Finest

Pork chops	33¢	Lamb chops	32¢
Roast beef	26¢	Wieners	21¢
Steak	35¢	Hamburger	20¢
Stew meat	16¢	Chickens	
Leg of lamb	29¢	(each)	58¢

Find out how much each child had to pay. Each price, except chicken, is for a pound.

1. Sally bought 6 pounds of steak.

2. May bought a chicken and a pound of pork chops.

3. Edgar bought 9 pounds of hamburger.

4. Bob bought 7 pounds of wieners.

5. Ethel bought 4 pounds of roast beef.

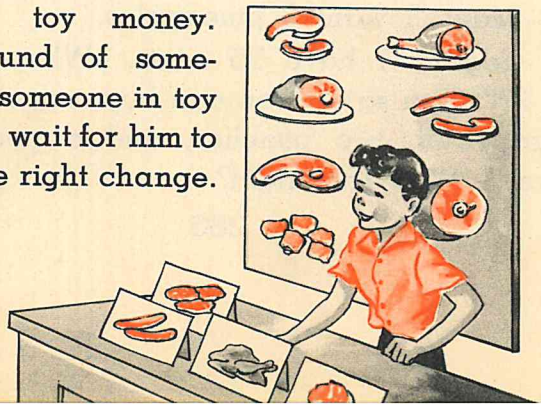
6. Rose bought 3 pounds of stew meat.

7. Rose also bought a leg of lamb that weighed 5 pounds

8. Sally bought 5 pounds of stew meat, and Grace bought 2 chickens. How much did each have to pay? Which paid more? How much?

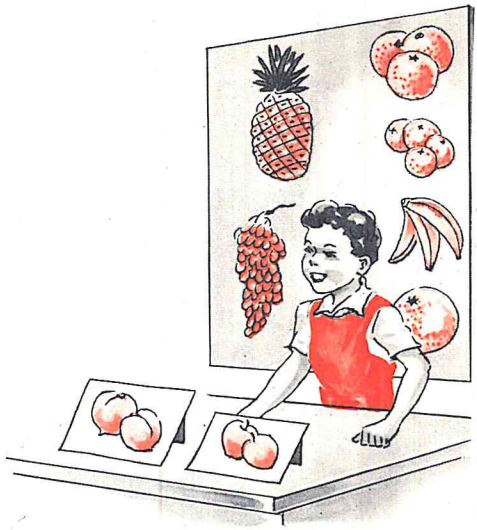
9. Edna bought a pound of steak and a pound of hamburger. Sue bought a chicken. How much did each have to pay? Which had to pay more? How much more?

10. Make toy money. Buy a pound of something. Pay someone in toy money, and wait for him to give you the right change.



You Will Want to Buy at Tom's Corner Fruit Stand

Large oranges	59¢ doz.
Small oranges	35¢ doz.
Bananas	5¢ lb.
Apples	48¢ pk.
Grapefruit	14¢ each
Pineapple	25¢ each
Grapes	30¢ lb.
Peaches	4¢ each



These children bought at Tom's Corner Fruit Stand. Can you find how much each had to pay?

1. Edna: "I want 8 peaches."

2. David: "I want 2 dozen large oranges."

3. Henry: "I want a peck of apples and a dozen large oranges."

4. Ethel: "I want 6 pounds of bananas."

5. Grace: "Please, may I have a half dozen grapefruit?"

6. Ted: "I want a dozen small oranges and a peach."

7. Rose: "I want 5 pounds of grapes."

8. May: "I want 8 pineapples."

9. Edgar: "I have 75 cents. What can I buy with it?" Tom said, "You can buy a peck of apples, a grapefruit, two peaches, and a pound of bananas." Was Tom right?

You Can Buy Almost Anything at Edna's Corner Drug Store

Tooth paste	39¢
Cold cream	23¢
Cough syrup	68¢
Ink	21¢
Ice cream cone	5¢
Mosquito spray	17¢
Rat poison	36¢
Castor oil	12¢
Fountain pen	67¢
Desk set	79¢

Find how much each child has to pay.

1. Rose bought 3 tubes of tooth paste.

2. Tom bought 4 tubes of cold cream.

3. Betty bought a box of rat poison and a bottle of castor oil.

4. Ethel bought a fountain pen and ice cream.

5. Pat bought a can of mosquito spray and a bottle of ink.

6. Grace bought cough syrup, ice cream, and a desk set.

7. Bob was going on a camping trip with 4 other boys. He bought 5 cans of mosquito spray.

8. Which costs more, castor oil and a fountain pen, or a desk set?

9. Sam bought tooth paste and cough syrup. How much did they cost?

Carl's Corner Clothing Store Sells the Very Best Clothes

Big Sale—Children's Clothing

Boys' shoes	$2.98	Boys' hats	$0.75
Girls' shoes	$2.89	Girls' hats	$0.59
Play suits	$0.69	Sweaters	$1.00
Party dress	$2.15	Necktie	$0.35
Gloves	$0.89	Stockings	$0.23

1. May bought 5 pairs of stockings. How much did they cost?

2. Edgar bought a pair of shoes, a hat, a sweater, and a necktie. How much did he have to pay?

3. Rose bought a pair of shoes, a hat, and a party dress. How much did she have to pay?

4. Edna bought 8 handkerchiefs at 23¢ each. How much did she spend?

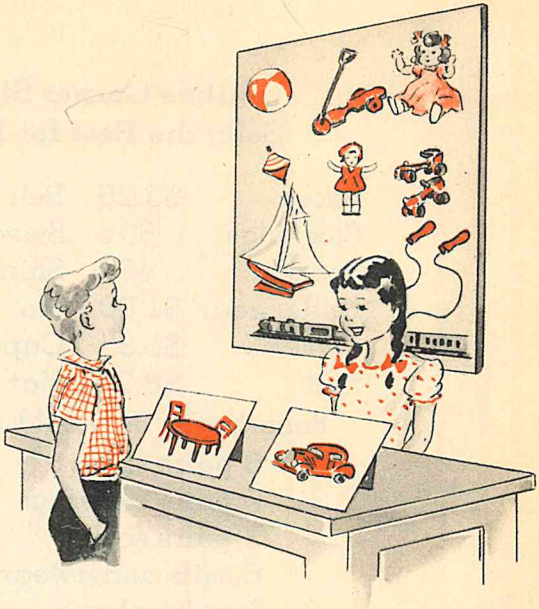
5. Make change from $1 for a play suit. For a necktie. For 2 pairs of stockings.

This is how much Carl sold in all. Find the selling price of each.

6. 3 pairs boys' shoes
7. 5 pairs girls' shoes
8. 8 pairs stockings
9. 6 party dresses
10. 3 play suits
11. 4 boys' hats
12. 5 girls' hats
13. 6 sweaters
14. 9 neckties

It Is Really Fun to Go to Joan's Corner Toy Store

Ball	39¢
Top	10¢
Sail boat	$1.39
Electric train	$8.95
Scooter	$1.98
Doll, large	$2.40
Doll, small	39¢
Roller skates	$1.90
Jumping rope	8¢
Doll furniture	$3.49
Automobile	$9.98



How much did each child have to pay?

1. Jane bought roller skates and a jumping rope.
2. Edna bought a large doll and doll furniture.
3. Bob bought an electric train, a sail boat, an automobile, and a scooter.
4. Sally bought a jumping rope and a top.
5. Don bought an electric train for himself, and a large doll for his sister. How much more did his toy cost than the one for his sister?
6. If you had $1 to spend, what would you buy? How much would you have left?
7. If you had $5 to spend, what would you buy? How much would you have left?
8. If you had $10 to spend, what would you buy? How much would you have left?
9. Carl bought 8 toy airplanes at 25c each. How much did they all cost?

Billy's Corner Store
Sells the Best for Boys

Shoes	$3.25	Belt	69¢
Stockings	50¢	Sweater	$2.65
Socks	45¢	Shirt	$1.10
Underwear	$1.00	Tie	65¢
Gloves	$1.35	Cap	98¢
Suit	$8.75	Hat	$1.65

Robert said he would use these clothes in a year:

3 pairs shoes	2 belts
6 pairs stockings	3 sweaters
9 pairs socks	4 shirts
6 suits underwear	5 ties
2 pairs gloves	2 caps
2 suits	1 hat

1. Find the cost of each of these things that Robert said he would use: (a) shoes; (b) stockings; (c) socks; (d) underwear; (e) gloves; (f) suits; (g) belts; (h) sweaters; (i) shirts; (j) ties; (k) caps; (l) hats. Save your answers for problems 2, 3, 4, and 5.

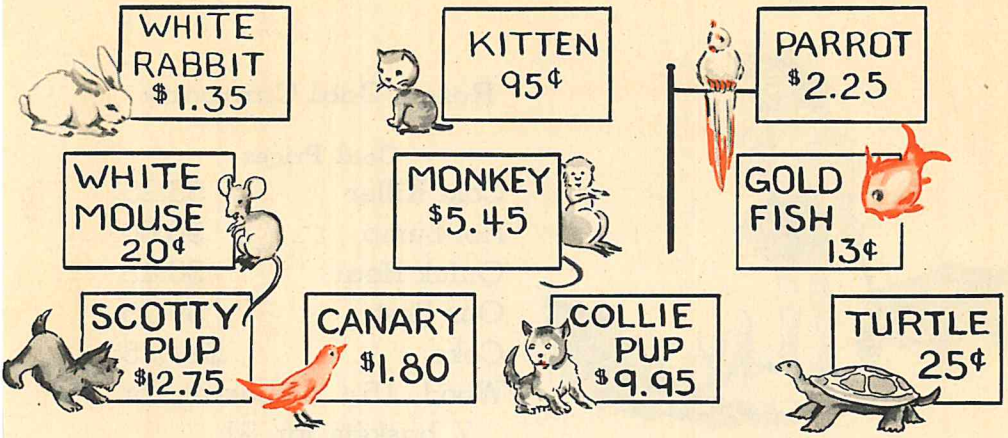
2. Find the total cost of the shoes, stockings, and socks that Robert would use in a year.

3. Find the total cost of the underwear, gloves, and suits that Robert would use in a year.

4. Find the cost of the belts, sweaters, and shirts that Robert would use in a year.

5. Find the cost of the ties, caps, and hat that Robert would use in a year.

6. Find the total cost of all the clothes that Robert said he would use in a year.



You Will Enjoy Looking at Pat's Pet Shop

1. What 3 pets would you like to have? How much would they cost?

2. Edna chose 2 goldfish and a turtle. How much did they cost?

3. Dolly bought 2 canary birds and a parrot. How much did they cost?

4. Edgar bought a collie pup and 2 white rabbits. How much did they cost?

5. Robert chose a Scotty pup, a kitten, and a white mouse. How much did they cost?

6. Ann bought 5 Scotty pups to give as presents. How much did they cost?

7. Earl bought a monkey, a turtle, and a goldfish. How much did they cost?

8. Joan bought a kitten and 2 white mice. How much did they cost?

9. Tom wants to know how many turtles he can buy for $1. He also wants to know how many white mice he can buy for $1. Can you tell him?

Rose's Coal Company

Coal Prices

Cold Killer	$5.25
Hot Lump	$6.60
Quick Heat	$8.45
Our Best	$9.75
Coke	$11.25

Wood 15¢ a basket, or 7 baskets for $1

Coal and coke are sold by the ton. A ton is 2,000 pounds. A truck usually hauls from 4 tons to 6 tons of coal at a load.

1. Find the cost of each of these:

6 tons of Cold Killer coal
4 tons of Hot Lump coal
5 tons of Our Best coal
3 tons of Quick Heat coal
8 tons of coke

2. The coal man said that 3 tons of coke would make as much heat as 4 tons of Quick Heat coal. What is the cost of 3 tons of coke? What is the cost of 4 tons of Quick Heat coal?

3. The coal man said, too, that 2 tons of Our Best coal would make as much heat as 3 tons of Hot Lump coal. What is the cost of 2 tons of Our Best coal? What is the cost of 3 tons of Hot Lump coal?

4. What is the cost of 1 ton of Cold Killer coal and 7 baskets of wood?

If You Toil or Tinker Try Harry's Hardware Store

Harry's father had given him some sales slips of what persons had really bought at the father's hardware store.

Make out sales slips, like the real ones, and find how much each of these persons must pay.

H. G. Fields
Hardware

Sold to:

Mr. Carl Stevens

Lawn Mower	$6.75
3lb. Seed	.24
Fertilizer	1.35
Spade	1.69
	$10.03

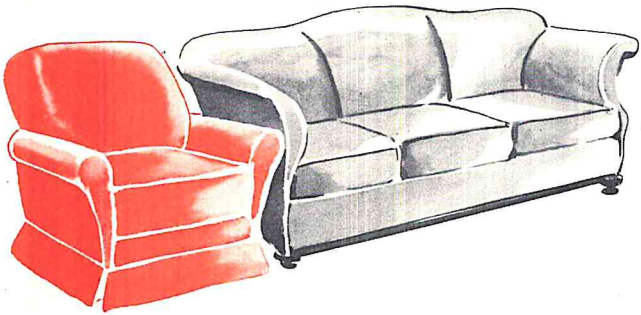
1. Tom Mason bought lumber for $6, 15 cedar posts for $7.50, 5 pounds of nails at 8¢ a pound.

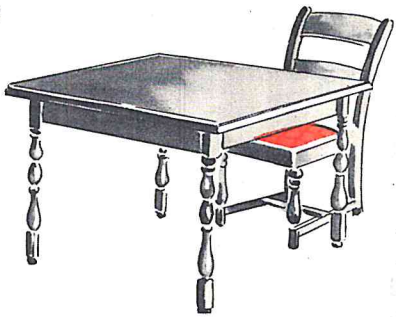
2. Mr. Jack Spence bought a plow for $24.75, a wagon for $89.50, a machine for cutting hay for $122.25, and a hay rake for $67.75.

3. Mrs. White bought a pair of scissors for $1.65, 2 kitchen knives at 35¢ each, and a knife sharpener for 95¢.

4. Mr. Gay bought 38 rolls of roofing at $3 a roll and 45 pounds of nails at 8¢ a pound.

5. Mr. Cox bought 14 feet of screen wire at 7¢ a foot and 2 pounds of small nails at 12¢ a pound.





You Will Feel at Home in Fred's Furniture Store

Find the cost of each kind of furniture Fred sold:

1. 3 sets living room furniture at $348.50 a set.
2. 4 sets of dining room furniture at $267.25 a set.
3. 5 sets of bedroom furniture at $198.65 a set.
4. 6 electric ice boxes at $212.35 each.
5. 7 gas ranges at $121.40 each.
6. 8 floor lamps at $24.25 each.
7. 9 end tables at $33.50 each.
8. Ann bought a set of bedroom furniture, a floor lamp, and an end table. How much did they all cost?
9. Edna bought a gas range, an electric ice box, and a dining room set. How much did they all cost?
10. Jack bought a living room set and a floor lamp. How much did they cost?
11. Robert bought an easy chair for $69.75, and a floor lamp. How much did they cost?
12. Joan bought 2 pictures at $5.98 each, and another at $3.98. How much did they cost?

Carmita's Mexican Gift Shop

Carmita's grandparents live in Mexico. Mexico is our neighbor, just south of Texas. Carmita's grandparents have sent presents and pictures to her. She is using them in her play gift shop.

1. Tom bought a big Mexican hat for $2.75. Mary bought one for $1.50, and Jack bought another for $3.50. How much did Carmita get for the three hats?

2. A fine big tablecloth is priced at $12.75. A smaller one costs only one-third as much. What is the price of the smaller one?

3. A very pretty silver bracelet costs $6.75, and another bracelet costs $2.95. How much less is the cheaper one?

4. Ellen bought a pretty string of colored beads for $3.50, a shawl for $12.95, and a water jug for $5. How much did she spend in all?

5. Carmita sold 5 silver rings for $1.25 each. How much did she get for all the rings?

Big Red Cloud's Indian Food Store

1. Glen played that he was Red Cloud selling Indian food to the white man. Fred bought 35 smoked fish at 7¢ each. How much did he pay?

2. Red Cloud had five dozen ears of corn. How many ears was this?

3. Mary saw a square of maple sugar priced at 40 cents. How much should Mary have to pay for $\frac{1}{2}$ of it?

4. Red Cloud had 5 pounds of red grapes, 15 pounds of green grapes, 7 pounds of white grapes, and 32 pounds of blue grapes. How many pounds of grapes did he have in all?

5. Billy asked for 1 gallon of blueberries. Red Cloud gave him 4 quarts. Was this right?

6. Jane bought 5 ears of corn and gave Red Cloud 15 cents. How much was this for each ear?

7. Tommy paid 45 cents for 5 smoked fish. What was the price of 1 fish?

John's Fish Market

John was in Michigan last summer. He sold fish to campers. He told the class about catching and selling fish.

1. He had to have 3 yards of cloth to cover his table. How much did this cost at $0.65 a yard?

2. Ice to keep the fish cool cost $1.50 on Monday, $1.20 on Tuesday, and $1.35 on Wednesday. How much did the ice for the 3 days cost?

3. He caught three large fish, each of which weighed eight pounds. How much did the three fish weigh?

4. He caught 48 fish on Monday and only one-half as many on Tuesday. How many did he catch on Tuesday?

5. One big fish weighed 11 pounds. He sold 5 pounds of it to Mr. Jones. How many pounds did he have left?

6. Saturday he sold 3 dozen sunfish. How many sunfish was this?

7. It takes 3 minutes to clean a big fish. How long does it take to clean 16 big fish?

Around the Clock with the Hour Hand

There are 24 hours in a day. An old day ends at 12 o'clock midnight, and a new day begins.

The short hand of the clock is the hour hand. It moves from any number to the next in one hour and moves all the way around in 12 hours.

Tell how long it takes the hour hand to go:

1. From 1 to 5 From 6 to 9 From 10 to 3

2. From 2 to 9 From 5 to 8 From 11 to 4

Tell how long it takes the minute hand to go:

3. From 3 to 6 From 4 to 9 From 9 to 1

4. From 3 to 9 From 2 to 8 From 11 to 2

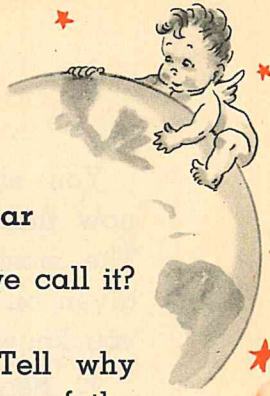
5. A child should sleep one-half the time until he is 4 years old. How many hours a day is this?

6. How many days are in a week? How many hours are in a week?

7. A grown person should sleep one-third the time. How many hours a day is this?

8. Jack works in a factory from 8 o'clock in the morning until 4 o'clock in the afternoon. How many hours is this?

60 minutes (min.) = 1 hour (hr.)
24 hours (hr.) = 1 day (da.)
7 days (da.) = 1 week (wk.)



Around the Year with the Calendar

January 1 is a special day. What do we call it? Do you go to school on January 1?

These days, too, are special days. Tell why each is a special day, and tell the name of the day. What do you do on each of these days?

February 12	June 14
February 14	July 4
February 22	October 12
April 1	November 11
May 30	December 25

Look at the calendar in your school room and find each of these holidays. On some calendars, the holidays are printed in red. Are the holidays printed in red on your calendar?

On what day of the week is January 1 this year? On what day of the week is Valentine's Day? On what day of the week is Christmas?

Try to find Thanksgiving Day on the calendar. What day of the week is it? What day of the month?

Find your birthday on the calendar. What day of the week is it? What day of the month?

When is Mother's Day? What day of the week is it? What day of the month?

12 months (mo.) = 1 year (yr.)

Looking Back Over This Year

You should know much more about numbers now than you did when you began third grade. The most important things you have learned are given on this page and the next three pages. If you know these, you are ready for the fourth grade.

1. Reading numbers. Read these numbers:

67 540 604 4,152 7,026 5,002 46,401

2. Writing numbers. Write these numbers in figures:

Nine hundred four.

Six thousand four hundred eighty.

3. Reading Roman numerals. Read:

III VI IX XII I V X IV XI

4. Writing Roman numerals. Write in Roman numerals:

1 5 10 4 6 9 11 3 7 12

5. The 100 simple addition facts. Say the sums:

8	6	4	7	3	9	5	4	9	8
7	5	9	6	8	7	8	6	5	5

6. Adding by endings. Say the answers:

17+6 29+7 13+9 26+8

7. Carrying in column addition. Write the sums:

	8	6		24		651
6	9	7	38	9	430	67
4	3	4	57	54	359	118
8	8	0	32	65	627	9
7	3	9	43	7	153	32

8. Subtraction without borrowing and subtraction with borrowing. Write the remainders:

76	584	63	58	72	765	641
34	340	25	9	64	393	274

9. Copying numbers neatly in straight columns.

Copy and add: 432, 67, 190, 17, 315

Copy and subtract 659 from 931.

10. The multiplication facts for 0, 1, 2, 3, 4, and 5. Say the products:

4	6	5	9	3	8	0	7	1	6
8	4	3	2	7	3	4	2	9	2

11. Multiplication without carrying and multiplication with carrying. Write the products:

23	40	76	312	729	262	178	479
×3	×5	×4	×2	×3	×4	×5	×4

12. Some times-and facts. Say the answers:

3×6+2	5×4+1	6×2+5	8×1+1
2×9+1	8×3+2	4×7+3	9×0+3

13. The division facts for 1, 2, 3, 4, and 5. Say the quotients:

15÷5	12÷3	9÷3	8÷2
14÷2	18÷6	25÷5	28÷4

14. Division when there is no remainder and division when there is a remainder. Write the answers:

$3\overline{)69}$ $4\overline{)29}$ $2\overline{)146}$ $5\overline{)250}$ $3\overline{)185}$

15. The fractions $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, and $\frac{1}{5}$. Find the answers:

$\frac{1}{2}\times 18$ $\frac{1}{4}\times 36$ $\frac{1}{3}\times 24$ $\frac{1}{5}\times 35$ $\frac{1}{4}\times 48$

16. How to tell time by the clock and the calendar. What day of the week is this? What day of the month? What hour of the day is it? How many minutes in an hour? How many hours in a day?

17. How to measure length. Name something about a foot long. Name something about a yard long. How many inches are in a foot? How many feet are in a yard?

18. Liquid measure. How many pints are in a quart? How many quarts are in a gallon? Name five things that are sold by liquid measure.

19. Dry measure. How many quarts are in a peck? Name something that is sold by dry measure in quarts. How many pecks are in a bushel? Name something that is sold by bushels.

20. Weight. How many ounces are in a pound? How many pounds are in a ton? Name something that weighs about an ounce. Name something that weighs about a pound. Name something sold by the pound; by the ton.

21. The use of dollars and cents. Find the answers:

Add	Subtract	Multiply	Divide
\$4.12	\$7.55	\$1.48	
.89	2.85	$\times 5$	$4\overline{)\$1.68}$
2.25			
.76			

22. Using addition, subtraction, multiplication, and division to solve problems:

a. Mr. Adams drove 312 miles on Friday, 298 miles on Saturday, and 87 miles on Sunday. How many miles did he drive in the three days?

b. Mr. Brown has 786 sheep. How many more does he need to have exactly 1,000?

c. If Carl earns $1.85 a day, how much does he earn in 5 days?

d. Dan had 126 marbles. He gave $\frac{1}{3}$ of them away. How many did he give away?

e. Ella had 360 picture post cards. She divided them into 4 equal piles. How many are in each pile?

f. Frank had $5.63 and spent $1.45 of it. How much does he have left?

g. Grace earned 6¢ on Monday, 4¢ on Tuesday, 7¢ on Wednesday, 9¢ on Thursday, and 3¢ on Friday. How much did she earn in all?

h. Henry read 23 pages a day for 7 days. How many pages did he read in all?

i. Irene had $1.50 and spent $\frac{1}{3}$ of it. How much did she spend?

j. Jack weighs 12 pounds more than Jimmy. If Jack weighs 88 pounds, how much does Jimmy weigh?

k. There are 344 pages in a big book. Katherine's big sister has read 186 pages. How many pages are left?

Write the sums:

23.

7	9	28	33	46	59	560
6	4	9	4	32	40	237

24.

				84	741	385
7	5	56	39	37	246	65
4	9	26	45	9	106	8
8	3	45	7	22	210	84
6	0	30	5	95	342	6

Subtract:

25.

9	17	28	45	79	485	774
7	8	12	35	50	251	123

Multiply:

26.

9	7	21	61	434	532	420
×2	×3	×8	×4	×6	×5	×7

Divide:

27. $3\overline{)96}$ $4\overline{)124}$ $5\overline{)250}$ $3\overline{)150}$ $2\overline{)124}$

28. Find $\frac{1}{3}$ of each of these numbers:

24 69 120 156 189 216 936

29. Find $\frac{1}{4}$ of each of these numbers:

24 84 120 168 280 484 1,648

30. Find $\frac{1}{5}$ of each of these numbers:

15 35 150 255 505 1,500 4,055

Pages 305 to 312 (Index),
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